

The
CHURCH BUILDER

By
ELBERT M. CONOVER

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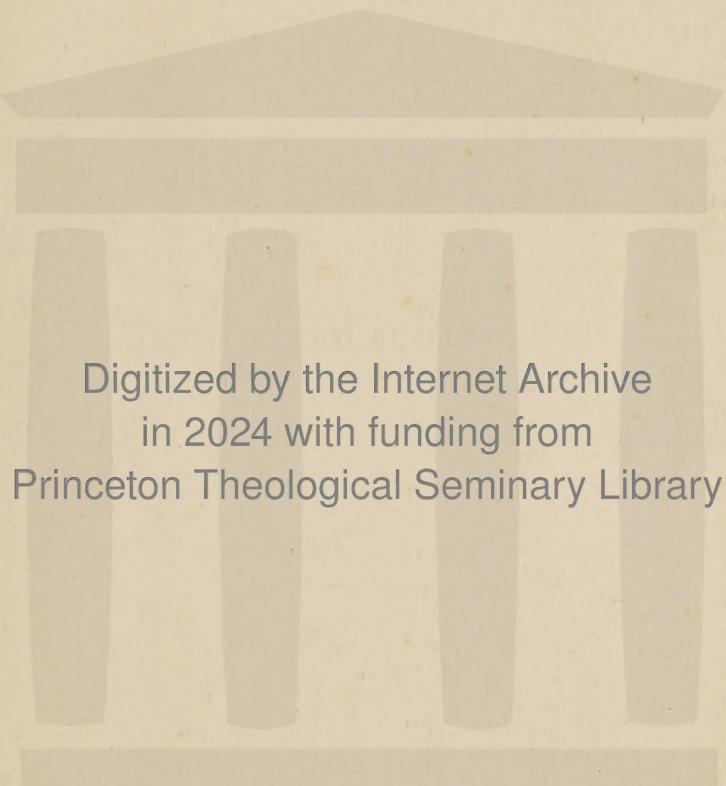
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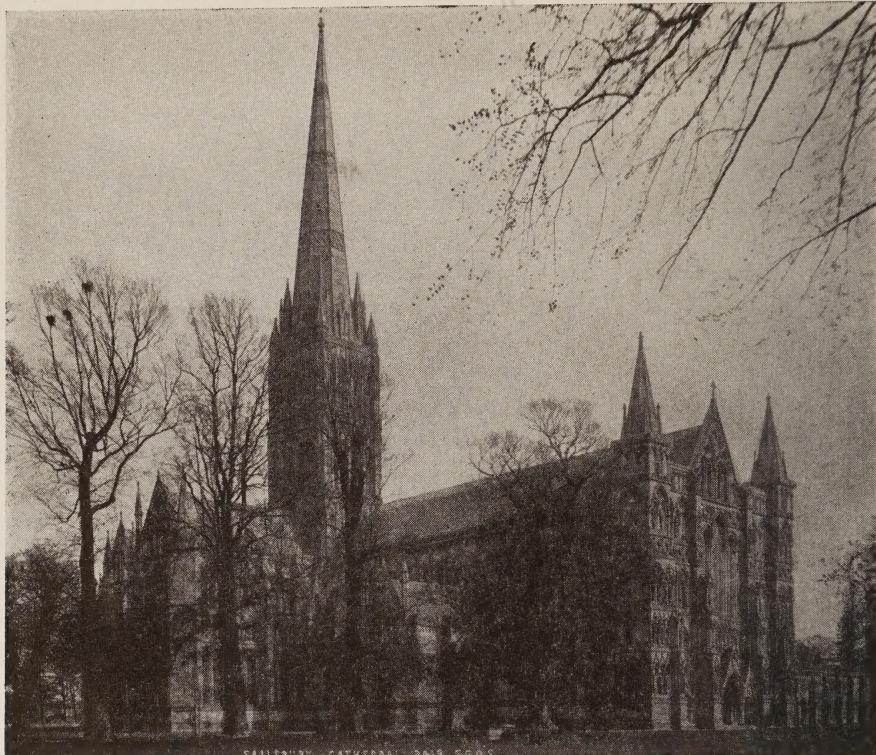
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THE CHURCH BUILDER



SALISBURY CATHEDRAL 9415 F.C.S.

The Cathedral of Salisbury, England

"So all over the plain by the sight of the steeple and at night-fall to Salisbury."

Pepys.

Rising in beauty and majesty above the Plain of Salisbury, the Cathedral marks one of the highest stages of achievement in Christian architecture.

Some, for the Glory of Christ wrote great music, sang inspired hymns, painted pictures that witness, lived the lives of confessors and braved the death of martyrs, served with hearts filled with devotion. Others built to His worship and glory hymns of praise in stone which also gave shelter and inspiration for Divine Worship.

Salisbury Cathedral was built rapidly from 1220 to 1258. The spire, 404 feet high was added, 1335 to 1375.

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The Church Builder

✓ *By*

ELBERT M. CONOVER, D.B., Sc.D.

Director of the Interdenominational Bureau of Architecture



Collens, Architect

Jamaica Plain Congregational Church

Published by

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THE CHURCH BUILDER
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Elbert M. Conover

Church of St. Ouen, Rouen, France

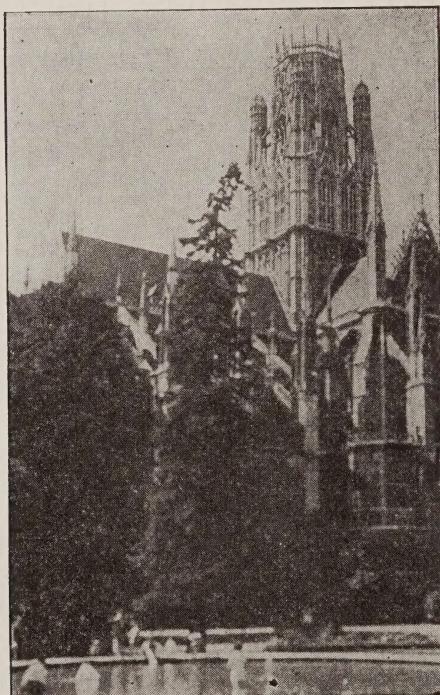


Photo by Author

This exquisite hymn in Gothic was begun in 1318 and finished 170 years later.

TO CYNTHIA

A little girl who loved the singing window in
the House of God.

A little girl and her father entered a church
filled with organ music and the soft brilliant
glow of the chancel window. Color and music
seemed blended in beautiful harmony. "Listen,
Daddy," she said, "the window is singing!"

MAN, THE ARCHITECT

He looks too long on yesterday
Who builds a tomb;
No frantic toil on cenotaph
Can stay the doom
Of Time, no pyramid hold back the hour
At man's desire—
Yet he has glimpsed Eternity
Who builds a spire.

—Leslie Savage Clark

From *Christian Century*



A. A. Dirlam, Archt.
Methodist Church, Milton, Mass.

An Ancient Parish Church in England



The parish church where after a week of toil the people come for praise and prayer, holds a place in human life, in literature and art, that could be achieved only through ages of Christian love and devotion.

The bold tower proclaiming the invincible Faith of the Christian, its blending into the tuneful environment, the ivy mingling the strong stone walls with the peaceful beauty of loved nature, all produce a scene such as has inspired wanderers over the Earth, and Browning, to long "to be in England again," to turn to God and Pray.

A CRAFTSMAN'S CREED

I hold with none who think not work a boon. Vouchsafed to man that he may aid his kind. With offerings from his chisel, wheel or loom. Fashioned with loving heart and loving mind. All of the fine traditions and the skill, come from my elders through the long line down, are mine to use to raise our crafts renown. And mine to teach again with reverent will. Thus do I live to serve, though least to pay with fingers which are masters of the tool. And eyes which light to see the pattern's play. As it unfolds, obedient to each rule of our dear art.

So all my craft is praise to God—at once part homage and part song. My work's my prayer, I sing the whole day long as Faith and Beauty shape the forms I mise.

From an ancient unknown source
Reprinted from Zion's Herald, Boston

THE CHURCH BUILDER

WHO BUILD THE CHURCH

They who dream of the sanctuary where, together, the people realize the Presence of God; they who envision the eager faces of boys and girls learning in rooms that invite them to larger lives; who see the happy fellowship of the church family in the social rooms; the pastor, the teachers, the church members who plan, pray and sacrifice, together with the architects, craftsmen, mechanics, tradesmen and workmen—all these are builders of the House of God.

The Need of the Book

A thousand million dollars' worth of new American Protestant church buildings and improvements will be planned during the period of a few years.

By telephone, telegrams, letters almost innumerable and by a procession of laymen and ministers in person, churches in every part of the United States and Canada are calling for counsel and advice respecting new buildings, improvements and equipment to help make church work more effective in these times. Architects faced with an unprecedented volume of church planning are eagerly calling for consulting service in order that their plans may meet the requirements of the seven-day-a-week ministry now rendered by the churches.

This book grows out of an experience of counseling in church building and improvement projects in every state in the United States and in Canada during the past twenty or more years, following experience in the pastorate and in church extension survey and administrative work. The author is a member of the Committee on Church School Administration of the International Council of Religious Education and the Committee on Worship of the Federal Council of Churches. He has reviewed thousands of church building plans, and has worked with many architects and churches throughout the country in helping to prepare the programs and lists of rooms needed for church work in the areas of worship, pastoral work, religious education and fellowship activities as required in each individual church building and improvement enterprise.

The book really is a product of the experience and knowledge of many persons actually engaged in the work of the churches.

The manuscript was thoroughly reviewed and most helpful suggestions were made by the Editorial Committee of The Church Building Commit-

tee of the Home Missions Council composed of John R. Scotford, editor of *Advance*, author of *The Church Beautiful*; W. Vernon Middleton, Executive Secretary, Board of Missions and Church Extension of The Methodist Church; and C. Harry Atkinson, Superintendent of Edifice Funds and Building Counsel of the American Baptist Home Missions Society. The Church Building Committee is composed of Church Erection and Extension Board and Christian Educational Executives of twenty-five or more Protestant denominations.

Miss Aida Hunt, Office Secretary of The Bureau of Architecture, supervised the preparation of the manuscript for publication.



H. Upjohn, Architect

**First Baptist Church
New Brunswick, N. J.**

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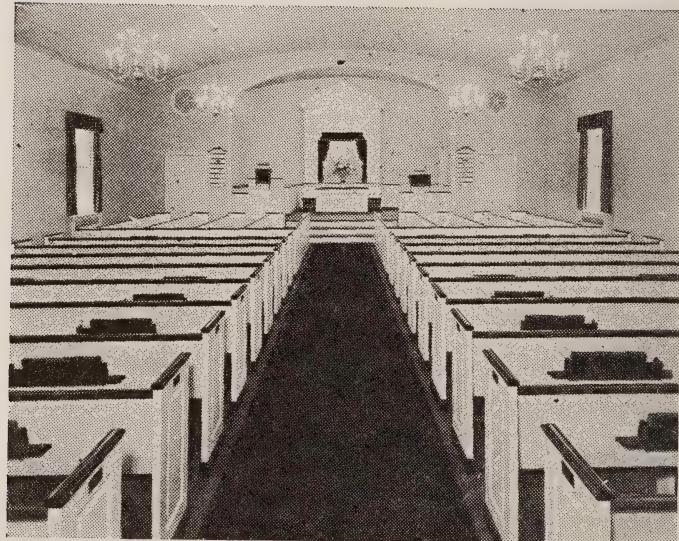
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Faith Lutheran Church
Los Angeles, California



Cherry & Matz, Architects

Baptist Church, Norwalk, Conn.
Choir in Nave

I

THE SIGNIFICANCE OF THE CHURCH BUILDING IN THE CHRISTIAN MOVEMENT

"See! this our fathers did for us!"

The church edifice as a structure is distinct from all other buildings. It may well be called "A Rendezvous of Man with God"—the visible representation of the dwelling of God with humanity ("tabernacling" with man). In the Christian religion, worship is held to be on the highest plane of human experience. The church building shelters and *encourages* the exercise of holy worship wherein men realize the Divine Presence. It provides a center for worship, fellowship and service activities expressive of divine life in human experience. The Christian church building itself as a part of the Christian movement is a notable contribution to human history.

One of the instincts of man has been to build an altar. Temples of many kinds in lands around the world have been erected by men stirred by different ideals of worship. We are taught that God Himself inspired the plans for the building and furnishing of the Tabernacle. How thrilling the account of the building of the Temple of Jerusalem! Church buildings as erected for Christian worship and work represent a religion of brotherhood, of divinely fired aspiration and fellowship with a good God. In troublous times the church became a sanctuary for the pursued and oppressed. Before its altar was kept the vigil from which noble quests were followed; kings acknowledged the supremacy of the church over the palace and the poor found in the church the presence of Royalty Divine.

In building the churches great devotion has been manifested, as in erecting the wondrous cathedral at Chartres, where a thousand men and women harnessed themselves to the carts and dragged stone and timbers to the site. The materialist may prate at evidences of superstition in building the ancient churches. Was it superstition that made Michelangelo, that great independent, work for long periods of time, lying upon his back, to beautify a place of worship? Rather, in this devotion of a strong-minded man to his task we see a type of consecration that speaks beyond the contemporary age, an example for our present time. Well may we emulate such constancy, and strive to bequeath to coming generations works that will inspire eternal ideals! Coleridge, standing before one of the great cathedrals of France, said, "No superficial emotion erected such a building!"

A decree promulgated in Florence commanded that, "Whereas it is the highest concern of a people of illustrious origin so to proceed in their affairs that many perceive from their works that their designs are at once wise and magnanimous, it is therefore ordered that architects of the commonwealth prepare a plan for rebuilding the church." "This is not to be undertaken unless the design be to make it correspond with a heart which is of the greatest nature because composed of the spirit of many citizens concordant in one single will." The city, while engaged in a flourishing commerce, gave such devotion to the building of the cathedral that the progress of its construction marked the stages of the city's prosperity for one hundred and sixty years.

A Noble Procession

To follow in the noble procession of church builders is a privilege of high order. The building of a church is a holy enterprise, to be undertaken reverently and intelligently, whether the structure be a wayside chapel or a cathedral in the heart of a great city.

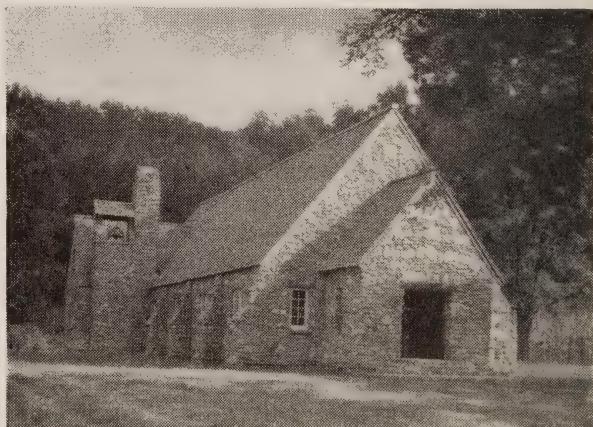
It is truly a religious enterprise to assemble and use funds consecrated to the high purpose of creating in material form an expression of Christian idealism which also will be the center of daily practical service for human needs. Such a worthy enterprise requires competent and reverent leadership and architectural service of corresponding quality.

We have entered upon an epoch of church building in America that may exceed in extent some of the great historical periods of this endeavor. Can we equal in purposefulness and intelligent idealism the achievements of the past?

During a period of ten years or so following World War II new Protestant church buildings, improvements and equipment costing at least a thousand million dollars will be planned in the United States. This is an enterprise that needs to call forth an enormous wealth of religious leadership and professional talent.

**Presbyterian Church
Dillingham, N. C.
in the Great
Smoky Mountains**

Photo by author



The rock dug out and walls laid up by local residents.

II

THE LANGUAGE AND SPIRIT OF ARCHITECTURE

Architecture is a language to be read and understood. In this mode of expression we find sources of inspiration, comfort, and instruction.

Indelible and undeniable evidences of the aspirations, ideals, and motives of every age are left in its architecture, which of all the arts is closest to human life. Its work confronts us everywhere. He who erects a building has a responsibility toward his neighbors, for he compels all who pass to view his work whether of beauty and orderliness or a thing of reproach. Ugliness in a building on public view is iniquitous.

The character of a civilization is measured by its art. Art is an effectual ally in the promotion of human culture, in the search for more abundant life. It may be a forceful agency for spiritual expression.

Christian architecture, the queen of the arts, calling into associated service all the arts, witnesses a transition from the material to the spiritual. The evidences of Christian reality are seen in the best of the fine arts in painting and architecture. Art aided Christianity mightily in winning the allegiance of the civilized world, becoming itself the mark of civilization.

One may well believe that a generation will rise to condemn some of the crudities in our church architecture and worship. Ugliness, even if consecrated, will not be forgiven. The aesthetic element emphasizes the appreciation of the beautiful and is not properly to be divorced from the spiritual. Some people have left the church, feeling that it did not concern itself with the practical affairs of everyday living; others have withdrawn because the church failed to minister to the aesthetic nature which to many is vital to spiritual experience.

The ministry of art is very practical. The man who is living the more abundant life is the more valuable and effective man. An environment of good architecture is conducive to thoughtful living. There are those who object to any apparent addition to the cost of a building for the sake of improving its appearance or effectiveness while they will not offend their neighbors by flaunting ugliness in their own personal appearance.

It is incumbent upon everyone who loves his country to develop an interest in the arts and contribute to the raising of public standards of taste and fitness in architecture. Thus will he aid in making our country a land where happiness, health, and peace of mind shall more and more

prevail, and in bringing nearer the Kingdom of God. That the American churches are appreciating the ministry of art is evidenced by an encouraging interest in fitness and beauty found in every section of the country.

Realities new to many are being discovered and enjoyed. Prejudices are being broken down. Helps to worship and more complete living, formerly ignored, are now being used. This does not mean that those interested in the artistic are merely imitators of churches in denominations that have retained the use of the arts. They are reaching out for better worship and for an architecture more in keeping with the fine idealism that characterizes our holy faith.

The Appreciation and Criticism of Architecture

The leader in building the House of God should steep himself in an appreciation and understanding of religious architecture. He should become fired with the desire to lead the people into the rich personal experiences possible in a church-building enterprise. One who addresses himself to the study of architecture enters upon a fascinating spiritual journey on which he will meet with both pain and pleasure,—pain when viewing the evidences of unintelligence and cheapness, for the characteristics of our living are plainly revealed in the buildings we erect; pleasure, as he enjoys the excellencies of *good architecture* whether it marks with distinction a roadside cottage, village chapel, school, cathedral, or a great commercial or industrial building. A fine by-product of our church-building enterprise in recent years has been the cultural and spiritual benefit derived by members of churches through the study of architecture as their building program progressed.

Some brief suggestions may invite one to enter upon a greater enjoyment of architecture and to follow its study by the aid of literature, photographs and travel.

What Should We Look for in a Building?

First, *for what use is it intended?* Is it a school, library, cold-storage plant, or the visible expression of the presence of God in the community? Is there evidence that its purpose has been met, and in as pleasing a manner as possible?

Composition

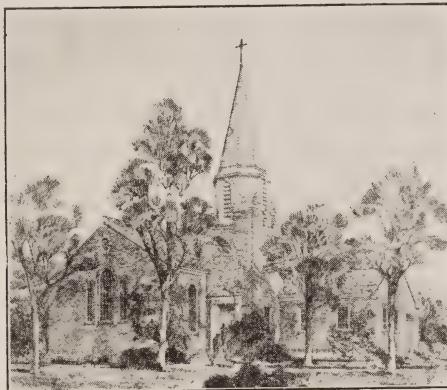
Composition in architecture is the assembling of many parts to make one complete and harmonious whole. Line, color, light, shadow, the several parts with different functions composed of different materials are to be related and combined into pleasing and functional unity.

Elements of Design

In good church architecture there must be a blending of the beautiful and the practical into an inspiring and satisfying whole.

If the building is a church, the exterior design should express the

aspirations and ideals of the faith to which it is related. *Proportion*, *scale*, *harmony*, and *balance* mean that the several parts are so related as to give a pleasing impression. A door, for instance, may be fine and well proportioned in itself, but may be out of harmony and out of scale as related to the rest of the building. The finger of an infant on the statue of a giant would be grotesque, yet blunders just as apparent are committed all too frequently in architecture and in much modern, so-called sculpture. Too often in American churches a window large enough for a great cathedral has been placed in the end of a small church. Then someone criticizes the "style" of the building rather than the unintelligent handling of elements belonging to the style.



A. Dobbins, Architect

Methodist Church, Pembroke, N. C.

Truth

In good architecture, there is no attempt at false effects. Classic columns should not be supported by plate-glass show windows. Painted tin should not pose as stone work. Boards an inch thick should not be nailed on the outside of plastered walls to imitate honest old English open-wood timbers. Plastered walls should not be marked off to simulate stone, nor plaster groins used to falsify real vaulting. An imitation stone arch made of non-supporting composition material is a fraud and a sham. Questionable manufactured materials should not masquerade as real materials.

Interest—Light, Shade and Color

We find in good architecture that the designer has taken into account the effect of shades and shadows and has secured contrasts and notes of emphasis, freeing the design from a deadly monotony.

Appraisal of Plan

Our estimate of any building must of course include a review of the floor plan. The plans proposed for a building should provide an orderly and convenient arrangement of the rooms and facilities for the activities required with easy means of communication throughout the building. A well arranged plan ought to be laid out logically like a well arranged book. A successful floor plan will make it possible to design a pleasing exterior design in any desired order or "style" of architecture.

The leader, consultant and committee responsible for securing an adequate church building must be able to assay the plan in the light of the needs and to assure the congregation that the architect has given them a workable and efficient floor plan layout.

Other elements to be studied in the enjoyment of architecture are: the impression of refinement, restraint and repose; of strength and vitality; the disposition of solids and voids; the marks of balance and symmetry.

The following named books (and others) are helpful to those who wish to increase their sensitivity to architectural expressions:

The Enjoyment of Architecture, Hamlin; *Essentials in Architecture*, Belcher (London); *The Substance of Architecture*, Butler; *The Poetry of Architecture*, Rutter; *The Architecture of Humanism*, G. Scott (London, 1924), and, of course, Ruskin's *Seven Lamps of Architecture* and his essays on the *Poetry of Architecture*.

Design for Chapel near a National Park



A. H. Fink, Architect

III

ARCHITECTURE AND EVANGELISM

The effective Church building re-enforces the invitation of Christ, "Come unto Me."

In designing a church building the evangelistic purpose of the Christian religion should be a governing motive. The building is an instrument in the furtherance of the highest human endeavors. It must be shaped to suit the dominant purpose for which it exists or else it is a futile and discouraging instrument.

One might believe that evangelism was not a controlling purpose in many church buildings that ministers have had to use. A very wide auditorium, with many hearers out of range of the speaker's eye, terrible acoustics, bad glass or a glare of lights, garish decorations, choirs exhibited and exposed; all have had their hampering effect on the sacred ministry of preaching. Disorder and discomfort are not conducive to spiritual inspiration.

The total task of evangelism, interpreted broadly, involves the Christianizing of life in the whole range of human experience. It includes a constant cultivation of the evangelistic motive in the hearts of church attendants and the enrichment and stabilizing of faith in the believing ones.

The pastor who shepherds his flock from field to field of life enrichment and growth in grace has to lead his people through a long series of progressive decisions. The late and greatly beloved Dr. F. Watson Hannan said that man is not really saved who does not practice justice, equity, cooperation, sympathy, good will. (See "Evangelism," F. Watson Hannan). Housing, wages, work, sanitation and education are all problems that are related to evangelism. The preacher needs an architectural environment that will re-enforce his evangelistic efforts. A suitable environment will stimulate the preacher to ring forth the Christian appeal with even greater forcefulness. It symbolizes for him the support of his local congregation and of the church at large, urging him, sustaining him. Perhaps the power of Canterbury Cathedral helped Thomas à Becket to defy the king and the king's men.

Dr. E. Stanley Jones, noted for his effective preaching, told the writer that he felt a stimulation in the beautiful Chapel of Duke University where he followed the sermon with appeals to the listeners to "step forward" to indicate their response to his appeals for definite advances in their personal religious lives.

It is impossible to estimate the numbers lost to the churches because

of the depressing ugliness of innumerable American Protestant church buildings.

The chancel plan of the platform is an aid to evangelism, not only by eliminating many distracting elements but by making it easy and natural for the preacher to step forth from the pulpit without turning his face away from the congregation to greet persons coming forward.

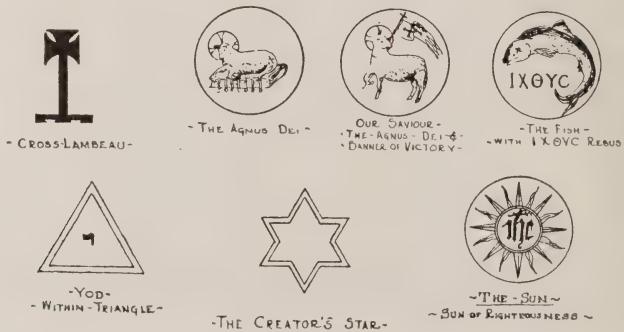
How many hundreds of times have contact and interest between listeners and the preacher been broken when the preacher turned to go across to the end of a convention hall type of platform and down the steps to reach the floor near the congregation!

The pastor who supervised the erection of the new edifice for the First Church of God in Lima, Ohio, addressed a group of fellow pastors in these words: "This building is planned with the work of evangelism as the controlling motive. The neat beauty of the exterior will attract people to the church. The interior design and arrangement will assist the preacher in securing a response to his message and appeals for personal decision by the listeners."

Some people fear that a good architectural environment will prove to be a hardship to fearless prophecy. I heard a carpenter announce, after he spat on the floor while helping set the furnishings in a beautiful sanctuary, "There won't be no religion in this pretty place." Within six months after the opening of this new church 94 new adult members from all economic levels of life in a southern city joined that church. That was twenty years ago. The church is still "going strong."

The truly Christian church will not narrow its field of evangelism to any one group of its potential constituency. An evangelism that will reach all groups in the economic scale is essential. Some Protestant churches have lost immeasurably because their message and appeal have failed to reach many of the so-called more prosperous or cultured groups. Certainly God loves the sinner in the country club or on the golf links as much as the outcast in the slum saloon.

The poorest of the poor will respond to beauty, but both poor and rich are repelled by ugliness. In designing many of the churches of a former generation this fact, demonstrated a thousand times in church history, has been disregarded.



IV

THE CHURCH BUILDING IN CHRISTIAN HISTORY

The principle of communal worship is basic in the Christian religion. Jesus said, "Where two or three are gathered together in my name, *there* am I in the midst of them." We cannot even pray the Lord's prayer by ourselves alone. We must come together and say "Our Father. . . ." Again Jesus said, speaking of the Lord's supper, "This do in remembrance of me." This means that we must have a place where we can gather for this most important and sacred ordinance.

Church architecture has always been a notable means of expressing religious conviction and faith. By its presence and design the church building is constantly proclaiming the presence of religion among the people. It should be recognizable as a house of worship and center of religious service.

The Present Program of Church Building Continues a Notable History

The present program of planning hundreds of new churches is an enterprise of tremendous proportions and supreme importance. To accomplish it satisfactorily will require devoted leadership on the part of church executives, ministers, people, and architects and craftsmen. Most of these buildings will be erected of enduring materials. They can prove to be serious handicaps to the on-going work of the church, or they can greatly facilitate the holy work essential for sane and safe living in the coming years. Devoted church leadership and qualified technical advisers are necessary if these building projects are to be carried out successfully, and not prove to be detrimental to the work of the church for the generations to come.

The Importance of the Study of the History of Church Architecture

The pastor, the builder, the churchman or student of church building should relate himself as a member of the noble procession of church builders through the ages of man's worship. In so doing he finds a wealth of enriching material in the history of religious architecture. He will begin, perhaps, with the story of Jacob who formed an altar out of the stone that had been his hard but comfortable pillow.

A practical book on church building would fail indeed if it did not recognize the continuing stream of the church building enterprise through the years of Christian history.

In Bannister Fletcher's *History of Architecture* one will find in non-technical language assisted by hundreds of illustrations, an unfolding

of the evolution of architecture through the ages that man has been a builder. E. H. Short's *History of Religious Architecture* is a splendid non-technical, well illustrated volume with effective preaching and teaching values. Hamlin's *History of Architecture* and his *Enjoyment of Architecture*, and Francis Bond's *Gothic Architecture* are all intensely interesting and invaluable in placing the leader of a modern building program in an intelligent and authoritative position in the Noble Order of the Builders of the House of God.

Before beginning the work of planning our own church building or improvement, let us then in our congregations, in the church school classes, in youth groups, have enriching experiences in relating our enterprise to the mighty stream of historical Christian expression in church building.

The smallest church building project is related to the ancient cathedral and to the far-away mountain chapel in the great testimony of Christian faith expressed in the church buildings erected throughout the ages of our Blessed Hope. The construction of a church edifice today is not an isolated enterprise. It is a part of the continuous expression of a sublime faith as evidenced in the buildings erected for the worship of God. A knowledge of the history of church architecture will help us to appreciate the significance of our own enterprise.

Parish Church at Vatteville, France, Romanesque Nave, Gothic Chancel



It would be as remiss to write a church school lesson while ignoring the existing religious literature, as it would to study church architecture for today and tomorrow, and ignore all that has been achieved in the notable endeavor of building the Christian churches. If we should know the great hymns, music and literature of religion, we should also know the effective Christian testimonies evidenced in the buildings men have erected.

The history of Christian architecture is directly related to the story of Christian life and forms a clear means of expressing it. Building the chapels under ground in the catacombs, with the Christian symbols on the walls, showing where Christians could secretly and safely worship; erecting with their own hands the beautiful abbeys of the monks in Britain reducing the wilderness of life and nature to a civilized and fruitful community; the work of men and women of the University Methodist Church in Tulsa, Oklahoma, who on Saturday afternoons for years worked on that excellent building, formed thrilling chapters in the Christian movement, in which people of many races and nationalities toiled together in the holy endeavor of building the House of God.



Strength and Beauty

V

FOUNDATION BUILDING IN THE UNITED STATES

Captain John Smith described the first church in the colony of Virginia as, "a homely thing like a barne covered with rafts, sedge, and earth." "Yet," he wrote, "we had daily common prayer morning and evening, and every three months holy communion."

As the colonies became prosperous, more pretentious meetinghouses and churches were erected and they frequently conformed to English traditions. Saint Luke's in Smithfield, Virginia, reminds one of an English parish church. In the middle colonies the meetinghouses of the Quakers, the churches of the German groups, those of the Church of England, and the Colonial or Georgian meetinghouses gave a variety of architecture. In New England the meetinghouse type generally prevailed with their spires rising among the green hills, a well known feature of the countryside.

Spires Against the Sky

Colonial architecture in America has a variety of exterior design expressions. During the eighteenth century the influence of Sir Christopher Wren and of the Renaissance architecture was strong. Christ Church in Alexandria, Virginia, was designed by Joseph Wren who is said to have been a descendant of the great Wren. An interesting feature of this church is the Palladian window originated by the Italian architect, Palladio. The old Polwick Church, near Mount Vernon, an example of the early American rural parish church, was built in 1769 with the aid of George Washington.

Some of the smaller churches have great interest, such as Gloria Dei, Philadelphia (1700), and Saint David's, Radnor, Pennsylvania (1774). Christ Church, Philadelphia, stands for the best in American Georgian architecture. It was constructed in 1727 from plans prepared by Kearsley, a physician, at a time when a knowledge of architecture was considered an element of culture essential to every gentleman. The building shows some influence of Saint Martins-in-the-Fields, London. A great Palladian window lights the chancel. The massive tower is surmounted by a graceful spire. Saint Peter's, Philadelphia, built in 1761, is another interesting example so far saved from the hands of "improvers." Saint Michael's, Charleston, South Carolina (1742), is believed to have been built from plans by James Gibbs, the noted follower of Wren.

Many excellent examples of early American work are found in rural sections. In Springfield, New Jersey, the original church was built in 1761. A battle was fought around the building in 1780. The present

building was erected in 1791, the nails and shingles made by hand. In Swedesboro, New Jersey, the Episcopal Church, built in 1784, is an excellent example of Georgian architecture with a Palladian east window. Two miles south is an old Moravian building and two miles north a stone church built by the Methodists under the direction of Francis Asbury, their first bishop. The Old Ship meetinghouse in Hingham, Massachusetts, was framed by ship carpenters in 1681. Its timbers suggest the structure of a ship.*

It is not possible to list all the notable colonial and early American churches. They are worthy of more extensive study as evidence of the ideals and habits of the people than has been given them. Many of these churches, despite an interesting diversity of style, show a strong classic influence throughout.

Following the Revolution, our architecture took on a more monumental character. Brick and stone came into general use, a pseudo Greek style became prominent and was even called the Greek Revival.

The Gothic revival in England had some influence upon our building. To this movement we credit the fine old Trinity Church, New York, built in 1843 by Upjohn. From 1850 to 1876 the Civil War and subsequent expansion brought on a period of political agitation and commercial prosperity while at the same time it brought on stagnation and ugliness in art, apparent in part, in large and costly buildings which were of inferior and unintelligent design.

As an expression in Christian architecture the Spanish contribution is interesting, colorful, redolent of devotion, and well suited to its environment. It gives to the United States a touch of romance and color from a beauty-loving race from the south of Europe. From the mud the Spanish priests made adobe bricks; from clay the beautiful roof tiles. Thus, right from the ground, a beautiful and suitable architecture was created. In Juarez, Mexico, there is an interesting example of Spanish mission architecture. The ceiling is composed of carved logs said to have been carried on the shoulders of Indians for a distance of 175 miles.

The Struggle of American Church Building

Church building in America has labored under tremendous handicaps. The great distance from good examples of Christian architecture, the lack of architectural education, absence of church unity, an apathy toward good usage and the appointments for public worship and a strong emphasis upon meetings and controversial preaching rather than corporate worship made the orderly development of a constant and inspiring church architecture most difficult.

The failure of architectural education in church work has been of incalculable cost to the church, as has the failure of theological schools to give candidates for the ministry training for leadership or appreciation in the fields of architecture and the allied arts. Until recently the churches gave little attention to producing religious leadership in the arts.

* See *Churches of Old New England*. Marlow, Macmillan, 1947.

VI

THE TASK THAT CONFRONTS US

"The Lord hath chosen thee to build a house for the sanctuary; be strong and do it."

An unprecedented volume of building construction is under way and in prospect throughout the country. Many architectural firms have been commissioned to design commercial, industrial, civic and institutional buildings whose value when erected will total in some instances for a single firm of architects more than forty million dollars. The churches have a large share in this tremendous volume of building. Sometimes, however, the people of practically all church denominations seem to be more deeply concerned with building colleges and other institutions than the needed church buildings.

The Leadership Needed

In order to accomplish the great task to which hundreds of Protestant churches have set themselves, two types of leadership are required. First, a *church building consultant* leadership extending down to the local congregation that will enable the church so to plan its building *program* that the architect can readily design the rooms required for the work of the church. Too often, churches plunge into building enterprises, appoint building committees and employ architects to prepare drawings before they have carefully formulated their policy and program or have estimated their requirements on the basis of congregational and community studies.

The Interdenominational Bureau of Architecture

The Interdenominational Bureau of Architecture was established in 1934 by executives representing 25 Protestant denominations. Its function is to give counsel and guidance to local churches and to promote better church architecture through institutes, conferences and literature. Frequently the Bureau is in a consulting relationship with enterprises whose total current values run into many millions of dollars. The Church Building Committee, composed of denominational executives, meets twice yearly to discuss church building problems and exchange ideas respecting counsel to local churches on church building finance and the guidance needed in advance of planning building projects.

Church Publications

Church papers have given notable leadership in church architecture during the past few years. The excellent journal edited by Dr. John R. Scotford of the Congregational-Christian Churches, *Advance*, and the

Christian Herald, an interdenominational religious magazine with more than 400,000 subscribers, have rendered great service in promoting better church buildings. *Church Management* and the *Pulpit Digest* have also contributed to a better understanding in this field. *Liturgical Arts* and *Church Property Administration*, Roman Catholic journals, are splendid in their fields. Many religious journals are quite willing to publish contributions on building and equipment when experienced clergymen, laymen or architects will prepare such material.

Architectural Leadership

The second type of professional service needed is architectural leadership. We have had many excellent church architects in the United States, but the economic depression and war years made it impossible to erect new church buildings, and many architects who did not retire or die during these periods turned to other lines of endeavor. The American Guild of Church Architecture, an organization of architects who are interested in church work, meets once or twice a year to exchange ideas and discuss reports regarding various phases of church building. The North American Conference on Church Architecture and the Allied Arts, composed of architects, craftsmen and churchmen, is a valuable factor in the movement to develop an effective church architecture.

Architectural magazines so far seem interested mainly in publishing strange and bizarre examples of church architecture and have done little constructively to assist the architect who is asked to do church work.

The Church Must Lead

In order to have a successful church architecture, the Church itself must accept responsibility for effective leadership. The Church must have a conviction regarding exterior design and expressions. It must be willing to understand and to promote effective arrangements for worship and Christian education. The Church must realize the need for a broad program of ministries to individuals and to the community including the churchly direction of social and recreational work, as essential in the Christian Movement. The Church must help develop a leadership which will be able to guide architects, religious leaders and local churches in formulating plans for buildings which are practical, effective and attractive.

The Church must realize the importance of art to religion. Ugliness should not be accepted as a means of religious expression. The Church itself must learn how to stipulate and encourage the expression of inspiration, truth and beauty in religious architecture. It must give guidance that will protect church people against the encroachment of fads and the propaganda of well meaning but deficient promoters of architectural expressions that may become quite disappointing in church life.

American Protestantism in "non-liturgical" areas has been far more concerned about spoken and written words than about the damage done to human souls by bad architectural environment.

VII

AMERICAN CHURCH DESIGNS FOR TODAY AND TOMORROW

The Importance of the Exterior Design

The Church makes one of its most important contributions to the religious and cultural experience of the community through the exterior appearance of the church building. Many persons receive religious inspiration by merely beholding the House of God. In this manner, one of the important *functions* of the church is fulfilled. The architectural designer who is concerned with the *function* of the entire church building should remember this. The function of the building, of course, is not limited to providing shelter for activities carried on within the edifice.

Church architecture has affected the lives of myriads of people who have never entered the portals of a church. Wholly apart from the activities of the church program, the physical existence of the church structure re-enforces religious life in the community.

The church building must be distinctive and easily recognizable as a place of divine worship. In this respect, some churches of the so-called "modernistic" design fail utterly. The exterior design should not require that a cross be attached in order to distinguish it from a secular building. It should proclaim that religion and belief in God exist in the community to such a degree that a congregation of people has sacrificed to erect the edifice for divine worship and service. If a tall church spire enhances this type of functionalism, then it is functional indeed and not a mere extravagance.

Church architecture must express religious truth. It must show in its texture the growing life of its time and the lasting ideals of the past. No one style of architecture is required for an effective exterior design. One might wish that style might be forgotten and ask only: "Is the design suitable, expressive of its purpose, and beautiful?" Great expressions in any style architecture adhere to fundamental principles of design.

What Must the Leader Know about Architectural Design?

The leader in the church building enterprise must help his people to distinguish between passing fads and functionally sound designs that will not become wearisome—a building so designed that, whether large or small, one will wish to return to it again and again to find spiritual inspiration and beauty and to recall the notable religious traditions of the human family.

After the floor plans have been fairly well developed the architect

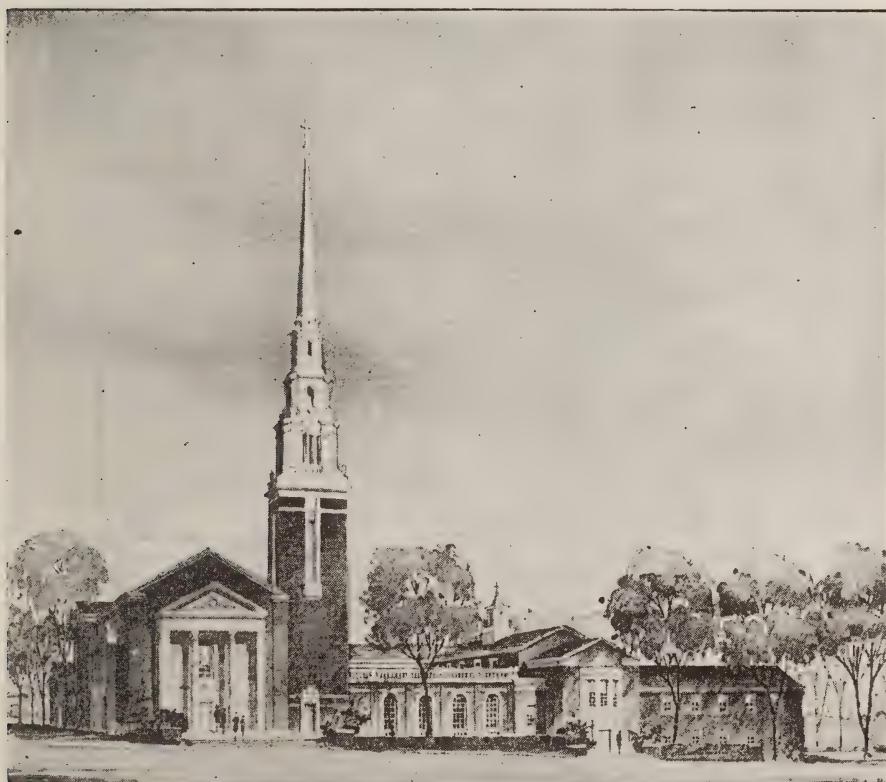
should present exterior sketches, but it remains for the people to reject or adopt the architect's exterior design. If they are intelligent and sincere in their responses and criticisms, they may assist the architect in achieving the design most suitable for their church. However, wise churchmen having engaged the architect to design a *church* will trust his superior experience and knowledge. Here are some questions that should be asked concerning any design:

Is it suited to the site and its setting?

Does it look like a church?

Is it distinctive and appropriate for this location and congregation?

Is durability of style and material indicated?



Nave,

Chapel,

Offices,

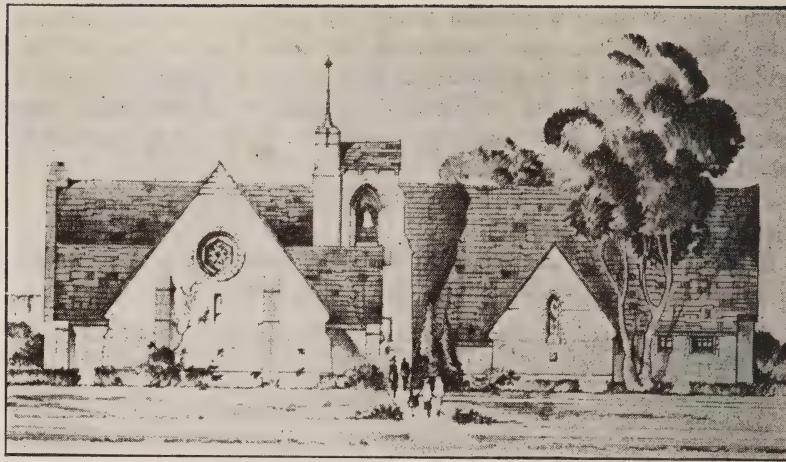
School

Thomas and Wagoner, Architects
E. M. Conover, Consultant

Preliminary Sketch, First Presbyterian Church, Jackson, Miss.

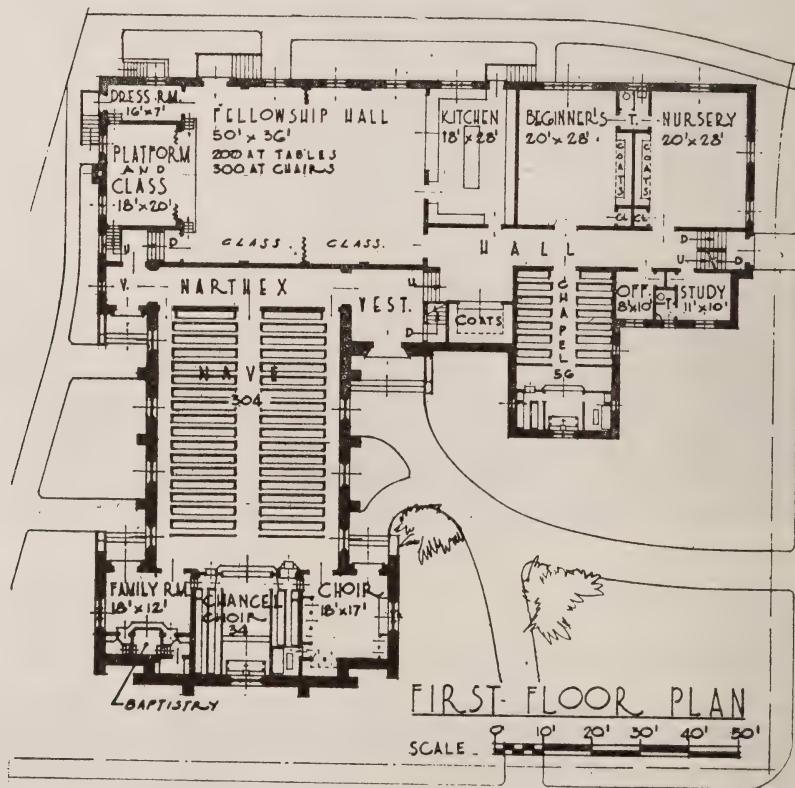
This church desires a building designed in the "Colonial" order. In keeping with this stipulation, the architects endeavor to provide distinctively for this very important congregation, a design that is in harmony with the spirit of the historical "style" but without slavish adherence to tradition.

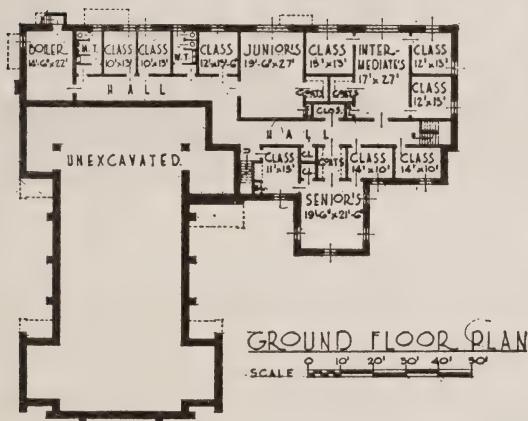
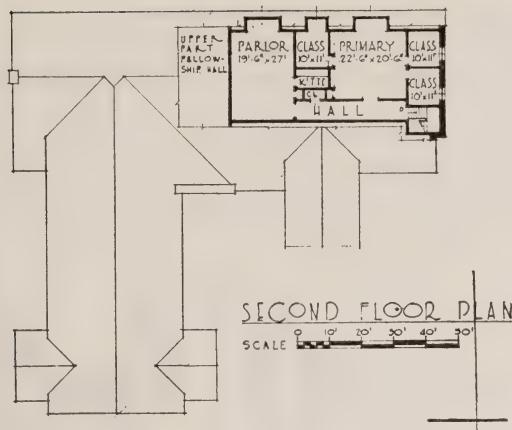
The fellowship hall is at the rear of the nave at the side walk level.



Preliminary sketch design and plans for Christ Methodist Church, Canton, Ohio.
Wenner and Fink, Architects.

This is such a first sketch as architects offer for study as a possible solution of a certain building problem. Note the important rooms on the main floor.





Ground floor and second floor plans of design on opposite page

The main entrance gives easy access to all parts of the plant. Note the location of the chancel with relation to the rest of the building. This church is allotted a new residential area as its responsibility. A baptistry for immersion is provided in a room that becomes a baptistry chapel. Communicants' rails are at front pews in nave and chapel.

A room by room study is necessary to enable one to realize all the facilities packed into this scheme.

The lot slopes to the rear and is capable of further grading. Therefore rooms may be placed on the lower level above the grade of the ground. Yet the main entrance has but three low steps.

Any desired form of exterior design may be used.

The low walls and "churchly pitched" roof help give the design character and interest with economy of construction.

The fellowship hall is spanned by the open timber roof giving it a high ceiling.

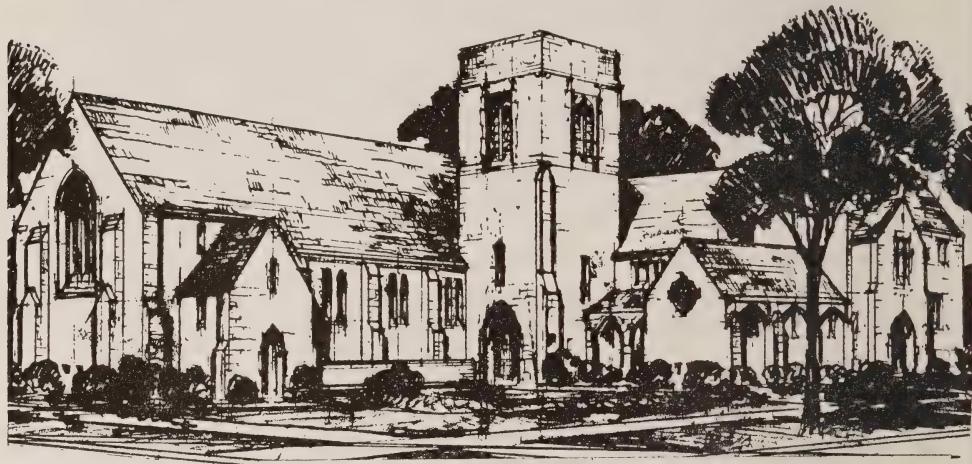
Does it stimulate one to pray and to worship?

Is the design one that will prove of lasting interest?

Is it well designed from the viewpoint of the principal approaches to the site?

Does each part of the building have a reason for existence? (Do buttresses actually support anything?)

Are any elements contrary to the principles of simplicity, honesty, and sincerity?



E. F. Jansson, Architect

Chancel,

Nave,

Main Entrance,

Chapel,

Parish Hous

Study for Pilgrim Congregational Church, Lansing, Michigan

A vigorous straight-forward design. The exterior design describes the floor plan. The tower forms the "climax" of the composition. It both unites the parts of the composition and also assists the worship unit in maintaining its proper position of chief emphasis.

Effectiveness of Design

There are features of architectural design that are inconsistent and incorrect. We must depend upon the architect to avoid these. It is not enough for us to say, "We do not like" something. The important question is: "Is it correct and is it right to do so?"

A successful architectural style is not chosen. It is a matter of achievement. A great architect will be great in whatever style he chooses and develops.

The church building design should express *aspiration*. Architectural lines that have an upward trend seem to aid in expressing *faith* and *praise* in the midst of a materialistic world. *Endurance, shelter and welcome* should be expressed in the exterior design.

The effectiveness of the exterior design does not depend upon the size or cost of a building. Let the size of the building be decreased rather than accept shoddy materials or defects in design.

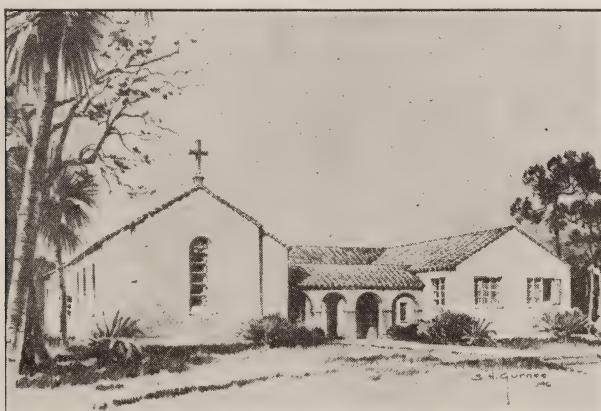
A good church designer will avoid tricks and fantasies that speak of passing fads. He will not seem to strive consciously for style. He should not coldly copy a style of the "last half" of some departed century. The language of architecture should be in his soul, and his design should be a sincere expression of his love of beauty and of religion.

Architectural design must be alive, not of a stereotyped or imitative nature. There is no reason to design a church building so that it appears to have been built for another time and place, unless imitation is desired, or those responsible for the design are minus a creative spirit.

The Church should be a leader in encouraging new architectural designs. Good church architecture will only grow out of deep religious feeling on the part of people and architect. The Church must succeed in integrating religion into the lives of people if church designs expressive of religious ideals are to be created. The Church represents the Eternal in the world; it must not employ tentative expressions in design or untried materials in construction but must express itself in a vital and beautiful art. The church should be designed for permanence.

Churches are advised to secure an architect who will make a separate study of each individual church problem, its history, traditions, surroundings and ideals. The church should not approve his offerings until convinced that the best possible design for the situation has been achieved. Don't tie the architect's hands and stifle his creative ability by telling him before he begins his work, that the church must be designed in any certain "style." Let him be entirely free in the matter of exterior design until he has offered his proposed solutions for the design problem.

When selecting an architect learn who on his staff is in charge of the work of design and whether this person is likely to continue as a member of the staff, at least until your building has been completed.



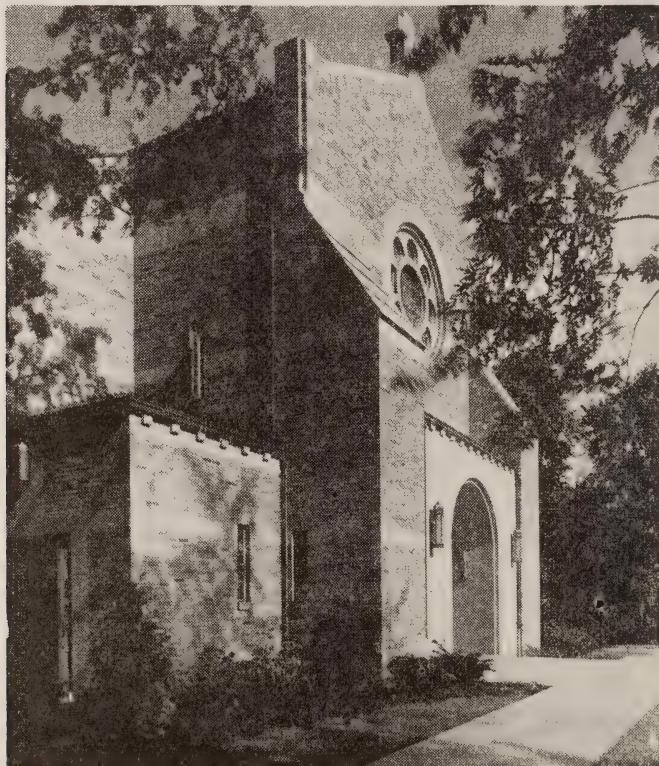
Barber & McMurry, Architects

Design for Methodist Church, Clewiston, Fla.

What Style of Architecture?

"What will be the architectural style of our new church building?" one asks. "I want nothing but Colonial," says another. Architecture is a language. We must be careful that it really speaks in a language other than slang or jargon, for architecture is a musical language and can be sublime or frivolous or wholly unintelligible. The leader and members of the committees who guide the church building enterprise should become informed regarding the evolution of different styles or orders of Christian architecture. They will find that no style came into being, full-blown, but that there has been an evolution of architectural expression through the Christian ages. Herein too, is where the so-called "modernistic" designers so often fail, when they try to create a synthetic expression wholly divorced from the accomplishments of the past and they forget that the truly contemporary is likely to be only temporary.

**Our Lady of the Angels Roman Catholic Church,
Cleveland, Ohio. Erected 1942**



Wm. Koehl, Architect
Gaspard Construction Co., Builders

A pleasing example of the use of brick. A facing tile used on the interior walls, eliminating use of plaster.

At the present time we are in a most difficult period in the history of church design. Some wish to select one of the historical styles and build in keeping with its tradition in full detail. Others wish to break entirely with the past and create something entirely new. So far, the latter theory has very seldom been attended with satisfactory results for the church. Then there are attempts, and sometimes with very interesting and pleasing results, to work in the spirit of older styles but unhampered by close adherence to precedents.

This policy in design has been attended with splendid achievement in some civic buildings. In the beautiful city of Lincoln, in the great agricultural state of Nebraska, stands the state capitol designed by the late Bertram G. Goodhue. Rising high above the plains, the splendid structure dominates the city and the surrounding landscape. This capitol is not a stupid accumulation of small domes, great high banks of steps, pillars that support nothing, high windows and extremely high ceilings topped off with a great dome with a silly robed figure of some ancient mythical character surmounting the top. On the noble tower of this building is the figure of a *sower*.



**Methodist Church
Red Bank, N. J.**

Wenner and Fink, Architects

An example of "Modernized Georgian Architecture." The wing at the right was formerly a residence.

The ornamentation is not composed of pagan eggs and darts and other symbols meaningless in the present times, but the golden grain and the fruits of the great empire of the West are built into this building. This is all in true harmony with the *Gothic spirit* in architecture, which is an eternal striving for perfection; for glorifying of the daily task. The exterior design and the whole spirit of the building are dominated by the vertical note. It is truly in the Gothic spirit, but yet is quite unlike any ancient structure.

In his church buildings, also, Goodhue succeeded in working in harmony with the eternal, ever upward striving *spirit of the Gothic*, but creating buildings that are functional and suitable to these times, and instantly recognizable as *churches*. See, for example, St. Thomas'

Episcopal Church, Fifth Avenue and 53rd Street, New York; St. Vincent Ferrer Roman Catholic Church, 869 Lexington Avenue, New York; The Chapel of the Intercession (Episcopal), 155th Street and Broadway, New York.

What is Gothic?

Coleridge compared Greek and Gothic thus—saying that upon entering a Greek Church, the eye is charmed and the mind elated, “Greek art is beautiful but Gothic art is sublime.”

While the work in the Gothic order denotes the greatest upward reaching in material form of the worshiping soul, its effectiveness does not depend upon the size or cost of the building.

A “Modern” Design Study for Bethany Church of God Detroit, Mich.



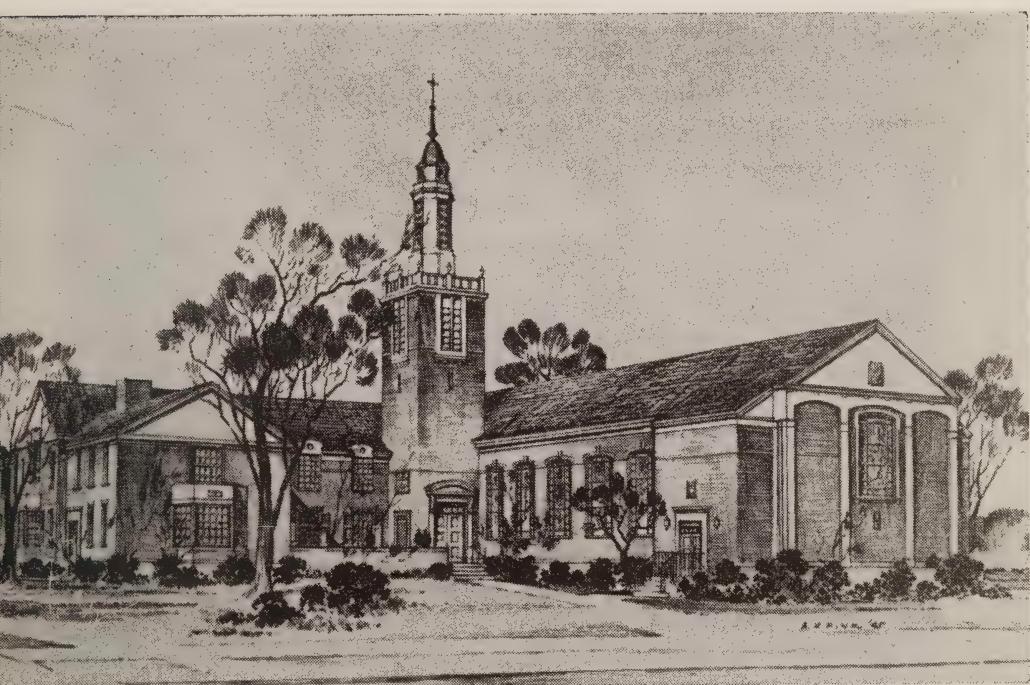
Earl Confer, Architect

In the Gothic spirit a great faith found sublime expression. It was not only the eternal beauty of those masterpieces in architecture but, also, the inner drive for perfection which they evidenced that we should strive for today if we are to create satisfying architectural forms that will have eternal value. For church architecture which seeks to achieve excellence, the *Gothic spirit* expresses lofty idealism and true beauty of form.

Many so-called Gothic churches in our country have failed to reach these ideals of good proportion, beauty and coherence. They are ugly, in bad proportion, with unsightly ornamentation, utterly unworthy of

the term Gothic. Hence, many indiscriminating people or those lacking in historical knowledge decry "Gothic." It would be just as reasonable to exclude music from the church because one hates juke boxes or what they usually spout forth. Just because a building has a pointed arch or two does not mean that it should be honored by the term "Gothic." It may be debased Gothic or just bad architecture.

Even some present day writers criticize "Gothic" architecture because of bad acoustics or lack of cheerfulness and light. A church can be clearly within the Gothic spirit of design and have perfect acoustics and as much window space as desired. The walls of the exquisite Ste. Chapelle of the 13th-14th centuries, in Paris, are almost entirely of glass. There is no excuse for bad acoustics anywhere.



Wenner & Fink, Architects

Preliminary Sketch for First Methodist Church, Arlington, Va.

Building completed 1947. An illustration of the wide range of variation possible within the spirit of more traditional design.

What About "Modernistic Styles"?

But some enthusiastic writers apparently want the Church to use a style or styles of church architecture totally divorced from all influences of the past. The much once publicized "modern," "contemporary" or non-traditional church design receives far more attention in some

publications than is warranted by its very limited acceptance by the local churches, who decide what they want and will pay for. "It doesn't look like a church" is the response of most congregations when a so-called "modernistic" type of design is presented. Among several hundred sets of Protestant church plans actually accepted by the congregations and reviewed by this deponent during 1947 and 1948, not more than half a dozen may be so designated.

Certainly we wish church architecture to be a creative and living art. The Church moves forward to render ministries in changing times and in different places, but it moves forward as the *Church*. It does not become a factory in order to render a religious ministry in a highly industrialized community. Neither does it need to have its buildings designed to look like factories.

Some writers contend for a "contemporary" design. But let us remember that the contemporary may be temporary.

**Spring Glen Congregational Church
Hamden, Conn.**



A. A. Dirlam, Architect

Exterior Design—Chancel and nave to the left; fellowship hall to the right. Education wing not visible. An interesting treatment in the spirit of the Renaissance order. Another proof that in order to be "functional" a design need not be of a radical, possibly temporary, unchurchly style. The spire forms the "climax" feature of a well-balanced design and marks the central entrance.

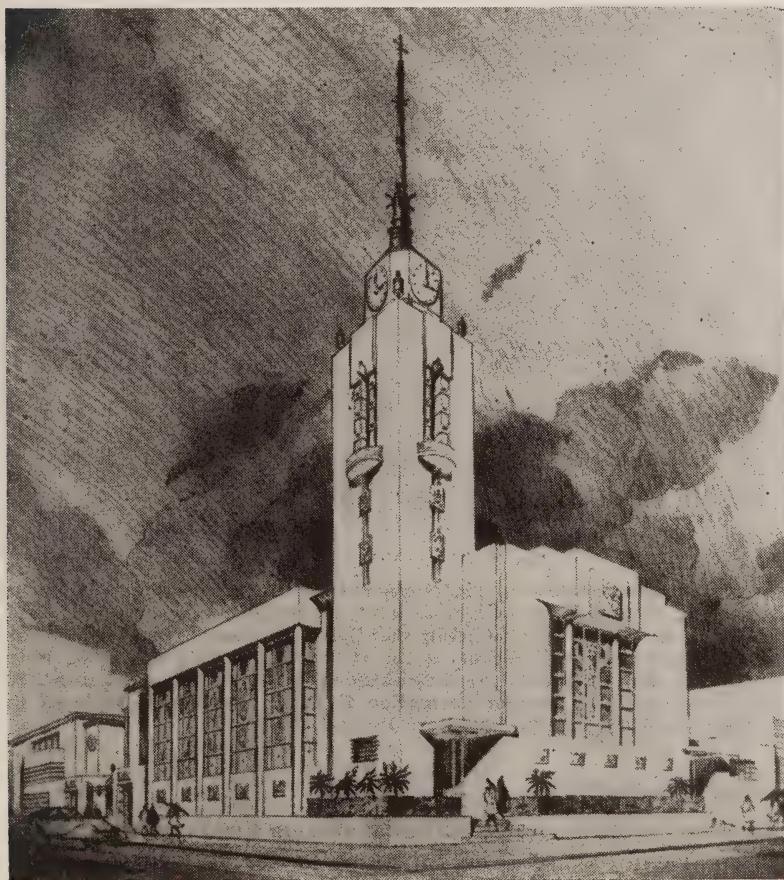
Architecture of the Times?

This is a time of confusion, materialism, secularism and irreverence. Future generations may feel a great shame for the human race that, in our times, is so confused, fearful and lacking in spiritual control. It may be better not to reveal through a materialistic architecture, the confusion and shallowness of "these times."

In sculpture, painting and music these characteristics of the times are amply exploited. These means of expression may mercifully be hidden in museums or destroyed. The church building, however, stands forth for all to see in many coming generations of a better age, we hope. Church architecture even in these times may be a witness of the faith which the Church may maintain despite the pressure of the secular, the irreverent and the unrepentant.

Modern design, if reverent and capable of meeting the needs of the Church will have ample opportunity to render significant service.

**A Study Design for a Church in Florida (First Street Methodist,
St. Petersburg) where sunshine is the city symbol.
Educational building at rear completed.**



Wayside Chapel
A. H. Fink, Architect

Air conditioning and double glazing of the windows will make a bright, cool sanctuary possible, while capitalizing the winter sunshine.

Design for St. Thomas Aquinas Chapel (Roman Catholic)
at the University of Connecticut, Storrs, Conn.
Constructed 1948



A. Reinhardt, Architect

A contemporary interpretation of the Norman spirit in architecture. The texture of the brickwork in Flemish bond with wide joints gives effective beauty. The sculptural group on the front will be illuminated by spot lights. The steel frame projects through the aisle roof back into the building at the clerestory recalling the flying buttresses of a former day. Beautiful metal work is included in the interior equipment. 261,000 cubic feet. Cost including interior decoration \$250,000. Another example of the increasing program of religious buildings at educational centers.

Functional "Design"

Those who publicize non-traditional design speak much of its being a *functional* architecture. The functions of the interior arrangements of the church or of a home are cared for by the floor plans. For a church, of course, the plans must provide the rooms and facilities needed for the broad program of modern church work. If desired these functional provisions may be housed in a very traditional order of exterior design.

But there is another function of the church building already men-

tioned—the enormously important function of the exterior appearance. The exterior design must be useful in more than just sheltering the worshipers. It must serve the high and very important purpose of giving ennoblement to the environment of the community, to stimulate religious consciousness, to provide a means of spiritual contemplation.

Architecture is the art of the functional *and* the beautiful. Beauty is highly useful in church work. When one views a building the mind must be satisfied that it is sensibly and well constructed.

But religious architecture must minister to heart and soul as well as to the intellect. Many “modern” designs fail in the ministry to the religious nature. Apparently the proponents of certain types of “contemporary” design think that by nailing an oversized cross on top of a box, it therefore becomes a religious building. The churchly purpose of the edifice must be evident in every part of the design. Church architecture must partake of both science and poetry. Some contemporary designers have apparently no use for poetry, much less of a hymn in architecture.

Of course there can be good modernism and bad, or just spiritually illiterate modernism.

Most of the so-called “modern” designs so far publicized have, from the viewpoint of the Church, been bad besides giving evidence of a lack of understanding of the full function and nature of the Church and its position as a continuing institution belonging to the ages of the past and carrying forward a complex ministry to unborn ages of the future. The transitory, the trivial novelty, the posing which characterize much contemporary design have no proper place in church building.

The Design of the Interior

Skillful architectural design is necessary in planning the main sanctuary and other rooms which will be attractive and adequate for their various functions. We all agree that a church building should have comfortable seats, correct acoustics, efficient heating, ventilation and lighting. But a church must be more than just a building. It must be so designed that when we enter we are moved to the attitude of prayer and praise. It must be a place that is appropriate for the celebration of the sacraments and all parts of the services of corporate worship, and where we can almost instinctively worship God in the Beauty of Holiness. Whether the church is small or large, it should have the qualities of sincerity, nobility and greatness which are found in all architecture that is successfully created of sincere faith in a God of infinite goodness and power.

The appropriateness of a church building for its divine purposes depends not upon the cost or size of the structure, but on the quality of thought that is put into its design. This same quality of thought must be given to obtain effective interior decoration and proportions in children’s rooms and recreational rooms, as well as in the main sanctuary.

Spires and Towers

The church tower or spire has moved poet and peasant to moods of admiration and worship. Greek and Roman temples had no spires.

The tower provides a note of climax in the design and emphasizes the upwardness of Christian aspiration. The architectural composition and the orientation of the site should be carefully studied so that the tower may take the most fitting position. Usually someone on the building committee urges that the tower be at the front "right on the corner." In some cases it is justifiable to place it so, but as a rule it is more pleasing when nearer the center of the entire design, forming a high note to which the eye is led from all the other elements or parts of the building. The nave and other sections of the building appear to better advantage when not hidden by a tower at the front.

A belfry or bellcote may provide a satisfactory high note in composition when it is impossible to have a dominating tower. The flèche (from the French meaning arrow) when well done, is a pleasing feature in church architecture and should be used more frequently. A slender spire lifting a cross against the sky presents an inspiring sight and fulfills an important function. When the spire is flood lighted or spot lighted at night, its usefulness is enormously increased. Some may object to a tower because of its cost, but if we spend money for music and pictures, we may justify the cost of the tower by its aesthetic values and the inspiration it provides, as well as its utility in bearing the bell, chimes or amplifier. One function of the tower is to indicate the "door of welcome" to the church plant. Some modern plans call for utilizing the tower to house air conditioning equipment. With the use of modern amplification, the tower may contain the organ chamber, even if the tower is not near the chancel.

An effective design can be achieved without a tower, and some buildings so designed are more expressive than some others that have towers.

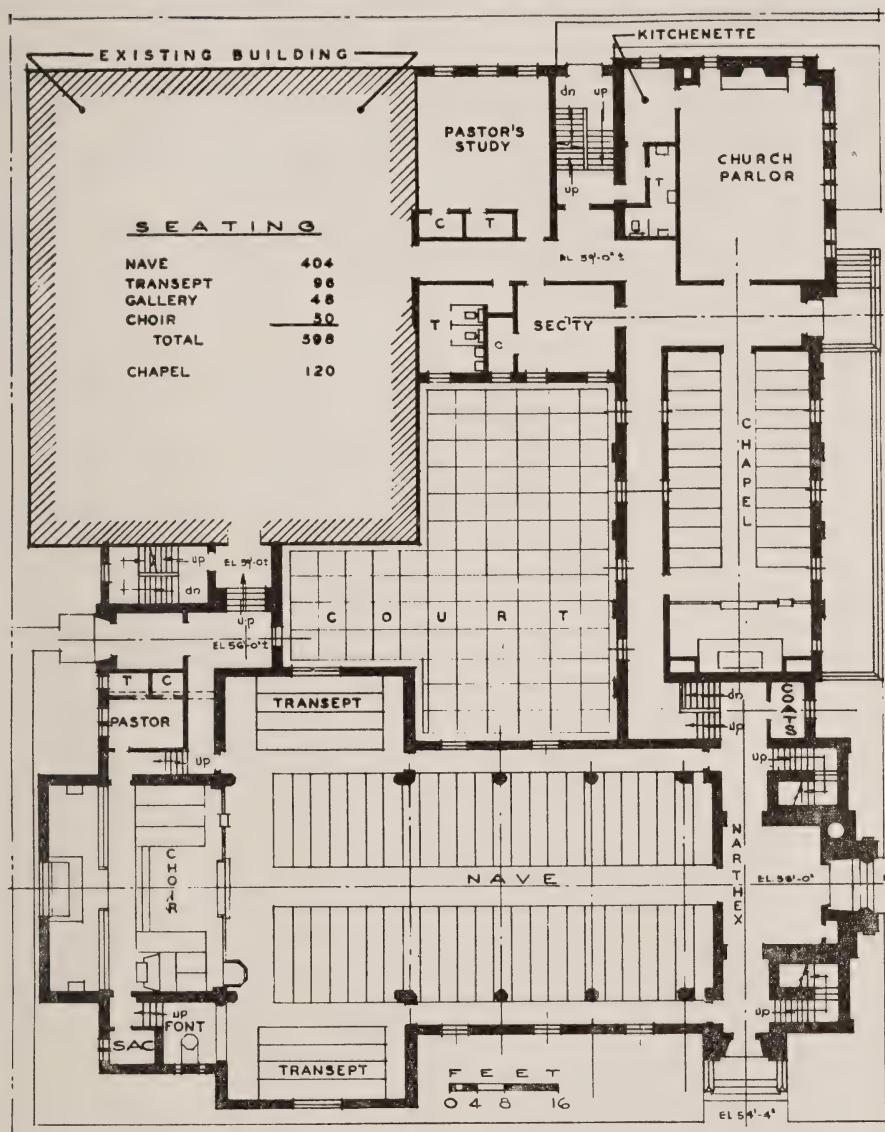
It would seem that every building erected for Christian worship and work should be surmounted by the universal symbol of Christianity, the cross.

The Requirements of Good Planning Design

The floor plans must be developed with a practical consideration of the work to be done within the building. The arrangement and relationship of rooms, corridors, storage rooms and all facilities must be planned with a regard for the convenience of those using them. The science of planning requires a careful analysis of the uses of a building as a whole. An architect, or committee member, for example, who may only have entered a church by the front door may not think of placing the chancel at the end of the building opposite the church school. He may not realize how the development of church work from mainly a preaching and worship program to a seven-day-a-week ministry to the whole person must require changes in the floor plan.

The preliminary floor plans come first in the work of the architect.

**Main Floor Plan of Building
to be added to existing Educational Building
Grace Methodist Church, Wilmington, N. C.**



Thomas & Wagoner, Architects

The seating in the transepts will be changed to face forward. One transept will form a baptistry chapel. The other transept will on occasion provide for the Children's Choir. The chapel and church parlor group will be splendid for weddings and receptions. Church secretary's office controls week day entrance.

The building must be planned from the inside, not from the outside, although we have put the matter of exterior design at the head of this chapter. A good, workable plan may be clothed in any "style" of exterior design.

Great progress has been made in planning modern Protestant church buildings to meet the needs of the day by day work of the church. Rooms that are used most often are placed near the entrances. Floors are level; there are enough corridors, providing easy access to all parts of the building; the several sections of the building are not too wide; children are given the most cheerful rooms, on the main floor. One need not pass through one room to enter another.

Placing the chancel at the end of the nave opposite the church school and recreational units of the plant has many advantages and works out very well in design.

The "Front Door"

"Which way would you face a church on this lot?" is a question often asked of the architect or consultant.

Church work has extended horizontally into all realms of life. In addition to the sanctuary for worship there are class rooms, rooms for reading, and social and recreational activities. The main entrance, therefore, might very well be put at a middle point in the floor plan, not at one end. This main central entrance can be marked by a tower or other feature which becomes the central point of the exterior design. In this position it is balanced by a part of the total mass of the building on either side of the focal feature in the exterior design. When a spire is placed at the front and the building stretched out like a train of cars, the design is not so effective.

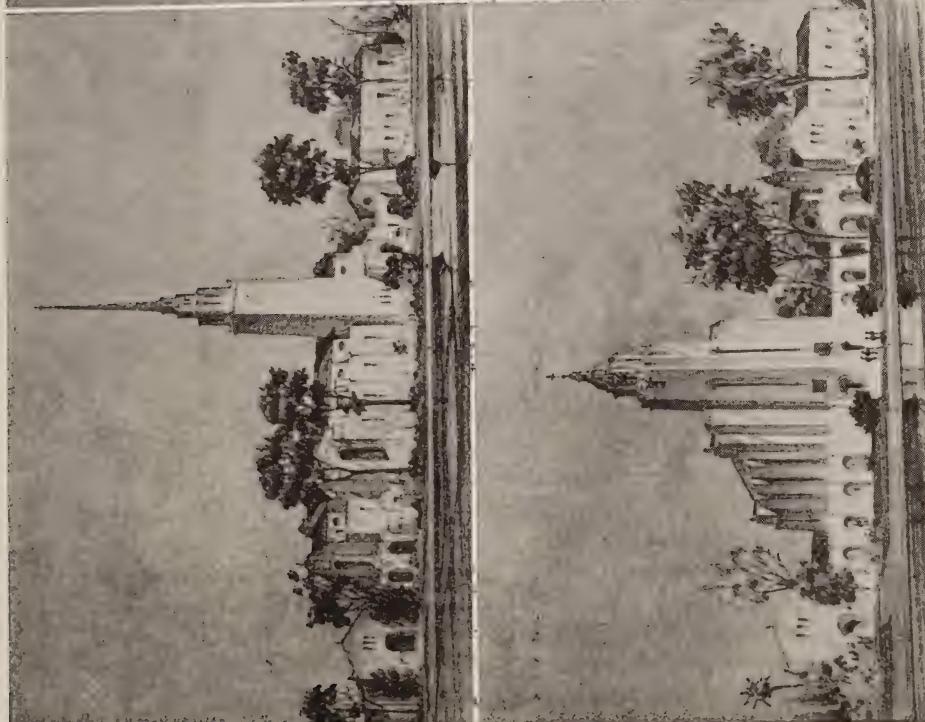
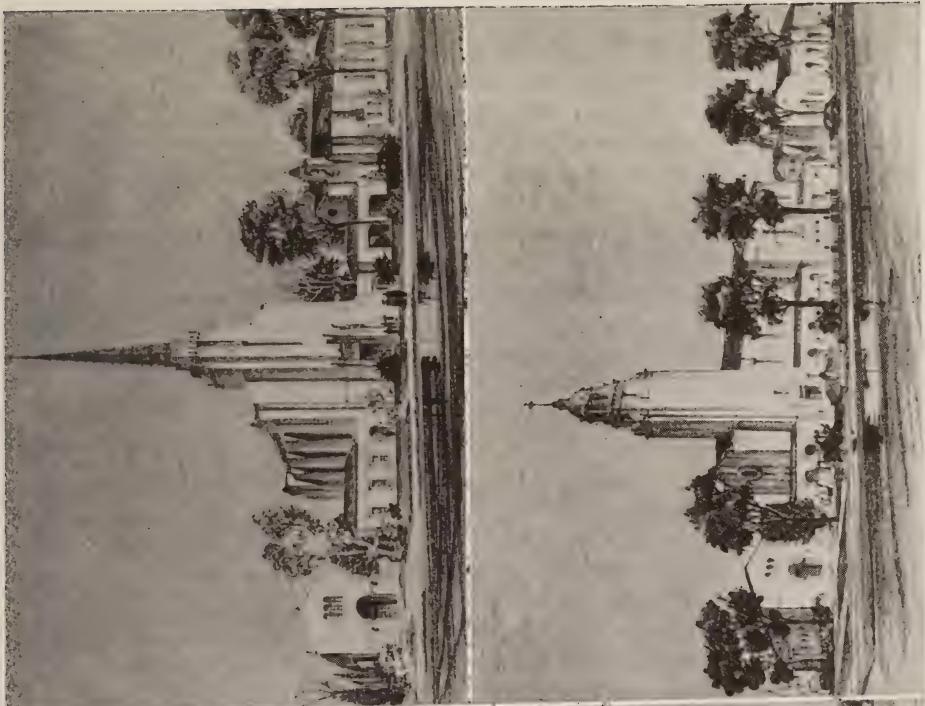
However, many architects and consultants have to contend with individuals on the building committee who insist that the church must "face" in a certain direction, with the front door and a steeple there. Modern church buildings must look well from all sides and it is sometimes difficult and not important to tell in which direction it "faces."

This theory in design is not new; the great Cathedral of Notre Dame in Paris has a very imposing front façade but the rear with the slender spire leading the eye upward to the great towers presents an excellent view and the one so frequently photographed. It presents a completed product in design when viewed from any point, a contrast to the hideous and profane back-yard views of many American churches.

Thomas & Wagoner, Architects

Four preliminary designs offered for Westwood Methodist Church, Los Angeles, California. The congregation began work in the chapel at the left. Educational building at rear completed (Faithful, architect).

The upper right hand design for administration unit, nave and recreational building adopted. Administration unit completed, 1948. Working drawings for nave in process, 1948. See interior view, Chapter IX.



Flexibility of Plan

Put this item prominently on your check list,—“flexibility” in plan to permit flexibility in use. Non-load bearing partitions may be removed or shifted to alter the sizes of rooms. Have all rooms accessible from corridors. Have rooms of different sizes. Have at least two doors for all large rooms. If desired they may later be divided by constructing partitions.

A suitable plan must provide for future extensions without the necessity of destroying existing construction, and without rearranging the principal means of circulation through the building. Heating, plumbing and wiring must be planned for possible future extension. The possibility of future enlargement may be provided for in any style of architecture, without doing violence to the exterior design.

Basements in the Plan

Basement space, if absolutely necessary in the plan, should be planned with more care and consideration than is given to other parts of the building. In northern climates, if a basement is not constructed, the foundation is usually laid about half as far into the ground as would be required for the walls of a basement with an 8 or 9 foot ceiling height. Hence, there would seem to be a certain economy in constructing basements in such situations. The alleged saving, however, may not justify the disadvantages of basement rooms. Count the cost of excavation.

The basement excavation should not be down to a depth of more than 4 feet below grade. The floor and foundation wall construction must be damp-proofed and mildew preventative applications should be used. There is no guarantee against dampness caused by condensation of warm air within the basement. Adequate light and ventilation cannot be supplied by tiny basement windows set in area ways.

If the site is large enough, grading can be done to give a sunken garden effect along one side of the building so that light and ventilation can reach down into the basement rooms. The terrace can be a rock garden or otherwise landscaped.

During winter as well as summer months, forced ventilation is important because the stale air that sinks to the floor of the basement must be withdrawn in winter and summer, otherwise a basement should not be used for any type of church work.

Concrete floors should never be left bare. Attractive floor coverings suitable for use on concrete below the ground level, should be used. Rooms which can be provided in a basement, excavated to depth of about 4 feet, are adult class rooms (never children's rooms), club rooms, craft shops, rooms for table and floor games, dark room for the camera club, storage space, lavatories, lounges with fireplace and kitchenette, and the heating plant.

On level sites it is best to avoid basements. In any case the narthex should be accessible without having to climb steps.

VIII

SITE PLANNING AND LOCATION

When selecting a new location such matters as harmonious neighborhood features, accessibility, future population trends, location of industries, etc., in the region must be considered.

It is very important to secure an adequate plot of ground. Many communities will not grant a building permit for the erection or enlargement of a church unless the church owns ground for parking the automobiles of the congregation. This requirement is rapidly being adopted throughout the country.

A church building should be spread out with outside light for all rooms. Space should be reserved for future extension. No section of a church building should be more than two stories high; this requires adequate ground space.

New church buildings are now being built on sites of several acres. There should be space for trees that will protect the buildings from noise and dirt of traffic and possible industrial sources. Space should be available for outdoor services and activities.

Have the architect or church building consultant, or preferably both, visit a site before it is purchased for they will think of many items that need to be considered before purchasing a site which may not occur to persons who are not constantly engaged in planning church buildings.

There is a growing trend to avoid locating churches on heavy traffic routes. People will find the kind of church they wish to attend, and the active church will find them. It is preferable to travel an extra few blocks and find a building nicely arranged on ample and beautiful grounds in a quiet location where one's family can approach the church without endangering their lives in traffic rather than to attend a church in a noisy, dirty, crowded location on a busy street.

The people who drive on the main street through a community at 60 miles per hour are not the ones who will join and support the church even if it is located on a prominent corner.

Locate the church where it will be accessible to the people who are expected to join and support it.

Landscape Architecture

Site planning includes study of the placement of the building on the property, taking advantage of natural slopes and considering the need for driveways and walks. Landscape plans should be developed along with the plans for the building. A sloping site offers certain advantages for church building and for outdoor activities.

Main Floor plan of a set of preliminary outline plans for a Protestant Episcopal Church in a new residential district.

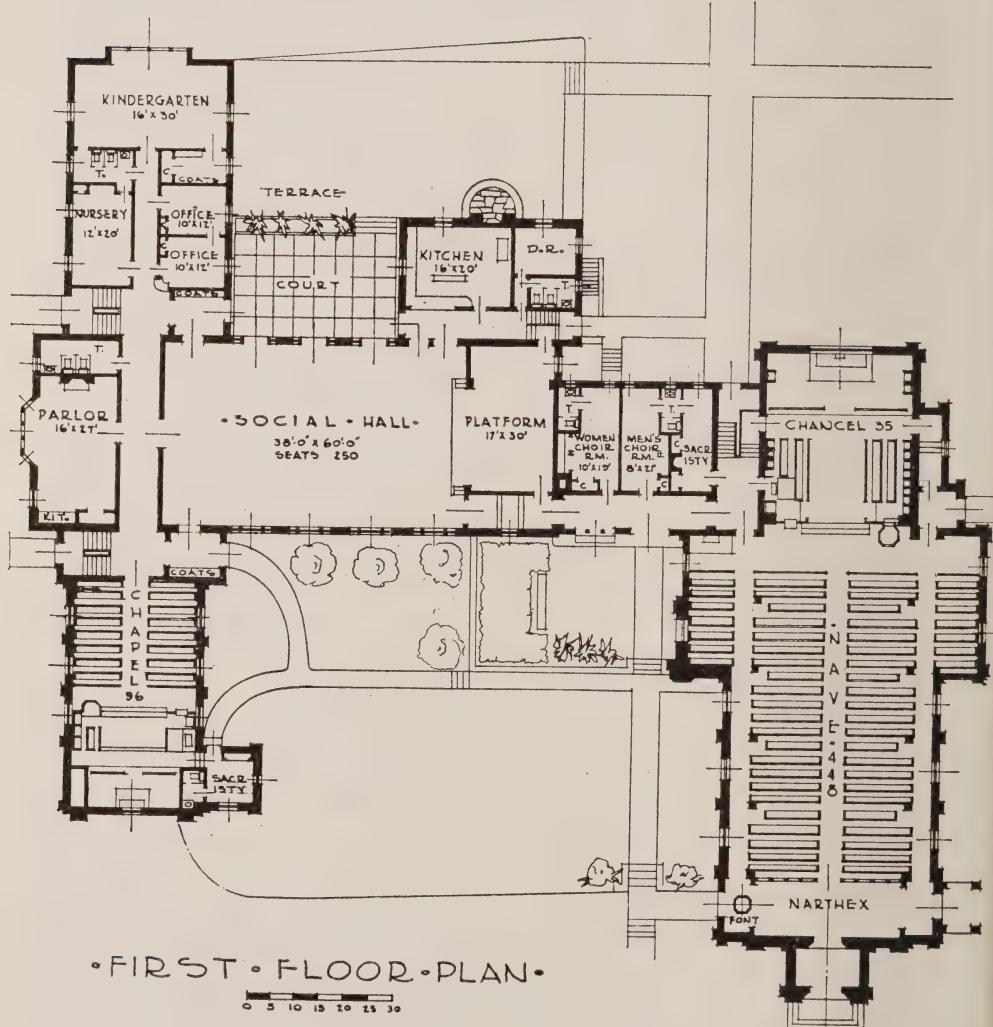
The building so described may be erected by units on a splendid site of five acres which slopes in different directions enabling the architect to take advantage of contours in effective ways.

Two exterior design studies were presented, one in the spirit of the Gothic, one with Renaissance feeling.

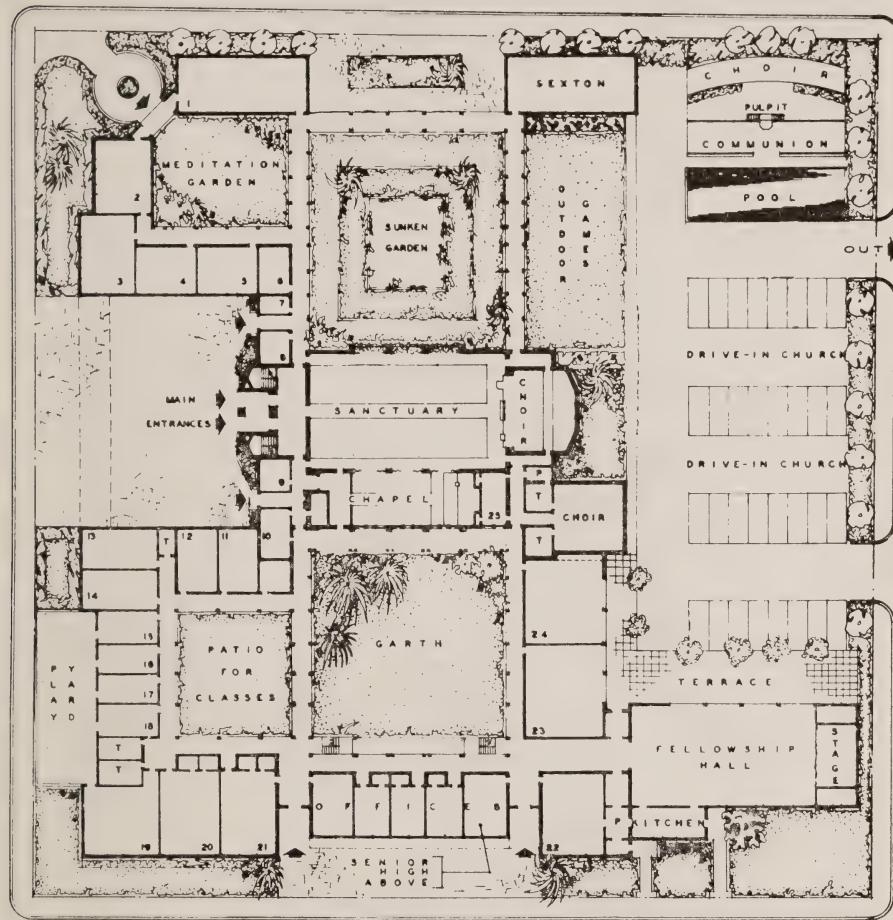
There is no basement under the nave or chapel. The ground allows well lighted rooms under the church school wing. Bowling alleys and other rooms some available as dressing rooms, under hall and parlor.

School rooms, pastor's room, pastor's secretary's office, and educational minister's room on second floor.

A counter and window enables one in the church office to be immediately available to visitors. The plan permits building by sections as the needs and resources grow.



The architect, working with the landscape architect, will achieve harmony, unity and balance in the total setting of building and grounds. Some architects are quite capable of handling the whole problem of site planning and planning the building but there is a very real need



Main floor and grounds plan for University-Catalina Methodist Church, Tucson, Arizona, H. E. Wagoner, Architect.

A careful detailed study of all the facilities shown on this plan will indicate the facilities within the church building itself and on the grounds which many churches are considering. This is a preliminary study sketch, but will likely prove to be the adopted scheme. The fellowship hall and rooms No. 10 to No. 24 inclusive will be the first unit to be constructed. This is a well-established church moving to a new site. The following is the schedule of rooms:

1- 6	Adults	20	Kindergarten
7	Office	21	Nursery
8- 9	Coats—Toilets	22	Church Parlor
10	Bride	23	College
11-13	Junior High	24	Young Adult
14-16	Junior	25	Class
17-19	Primary		

The Preston Road Christian Church, Dallas, Texas



Perspective Study by Tatum, Alexander and Quade Architects
E. M. Conover, Consultant
The construction plans and specifications for the first two sections of this scheme
to be erected on a 13 acre site are being prepared (1948). See page 142.

for landscape architecture in the church building program. Landscape architecture is a highly important profession whose members are trained, as in other specialized professions to secure greater and more satisfactory values for the moneys expended. A church with good landscaping attracts people and renders a valuable service through adding beauty to the character of the community. Amateurish landscaping may prove to be an expensive failure rather than an economy.

A landscape architect will know what native shrubs and trees can be moved and successfully cultivated in a new location. He will know how to blend colors of foliage and blossoms and what shrubbery and trees can exist successfully outside of their natural environment. The amount of care required for plants and shrubs is another important consideration. Few churches employ full-time gardeners, although churches are making use of boys' clubs, under expert professional supervision, in caring for grounds, etc.

The Plot Plan

Before the architect begins the preparation of tentative plans, he must be supplied by the owner with a contour map and subsoil survey of the property, with all set back requirements and zoning regulations clearly indicated. Strangely enough this obvious requirement is neglected by many church boards, and the architect's plans have to be altered on account of failure to define all the zoning and other stipulations on the property survey. One church purchased a triangular lot which proved to be too small for the church building after the zoning requirements were surveyed. Also it signifies nothing to report, for instance, the plot is "filled in" ground—there must be an adequate subsoil survey. There might be solid rock under the fill or quicksand where there is no fill in dirt.

The University Christian Church Berkeley, Calif.



A view of a corner of the grounds reveals the splendid service rendered through landscaping on a rather difficult site.

IX

BUILDING FOR THE WORSHIP OF GOD

The “Sanctuary”

The term “sanctuary” as we use it means the entire space used for public worship including the nave, choir and chancel. This is in an effort to avoid the word “auditorium,” quite unfit when used in designating a room for worship. An auditorium is a place where people may sit to listen and observe. The church is for a worshiping congregation—not for a passive group of auditors. The church sanctuary is planned not only for the congregation but, also, to meet the needs of the minister, choir, and others who assist in this greatest of all human experiences, the worship of the Everlasting God.

The Requirements of an Effective Sanctuary

The sanctuary should be inviting—a place where people will be glad to come and to return again and again. It should create in the worshiper a sense of nearness to God without a feeling of withdrawal from others or isolation from the world. The needs of the crowd were in the mind of Jesus while he was on the Mount of Vision. So for the worshipers, the sanctuary will not be a place of escape, but a place of vision and re-enforcement, from which the Christian will be encouraged to return with enthusiasm to the round of human living and service.

Distracting elements, such as glare from badly-placed windows, garish decoration, displayed choirs and organ pipes, or improper lighting can and should be avoided. A well-designed sanctuary will have a focal center of interest. Beauty of line and color inspires the individual and unites the congregation in the spirit of devotion. Symbols are valuable in recalling significant incidents connected with the Christian faith.

A satisfactory sanctuary plan provides a nave for the congregation; a chancel, containing in most churches the choir, pulpit, lectern, clergy stalls, baptistry or font. (A traditional location of the baptismal font is near the entrance to the nave symbolizing entrance to the Christian faith through baptism.) Some churches include a communicants' railing besides the altar or communion table.

The narthex is a very important space and should be designed with great skill. It is the place of transition from the outside world to the place of worship. The sacristy is needed for storing and preparing equipment for use in the communion service. Usually there is space for the organ and console.

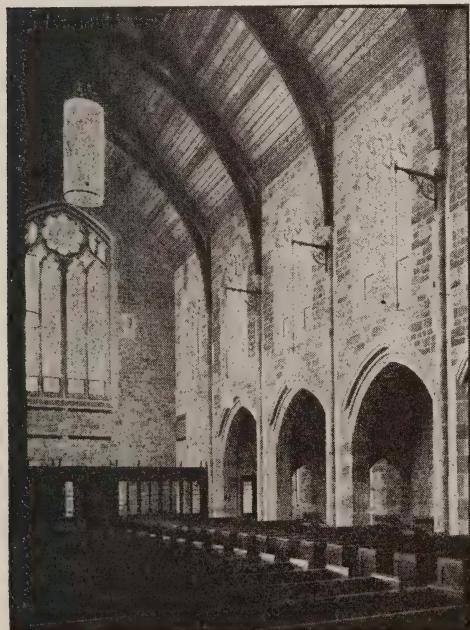
The chancel may be joined to the nave by an arch, although often there is an advantage in design effectiveness in carrying the roof line of

the nave clear through to the chancel wall. Sometimes the beginning of the chancel is marked by a step and communicants' railing or a rood screen or rood beam. There is a definite trend, in Methodist churches for example, to replace the communicants' railing in the chancel to a position directly in front of the altar or communion table.

The Nave

After deciding upon the space and minimum requirements for a successful chancel, the nave may be planned. In determining the size of the nave, keep in mind how frequently it is to be used. Do we expect everyone to attend worship at the same hour? The rapidly developing trend to have at least two services on Sunday morning will make it possible for wise churches to have smaller sanctuaries which can be filled on ordinary occasions (if any church exercise is ordinary). Most churches are not planning their seating capacity for the larger attendance on special occasions when several services may be held. The money saved by building smaller churches can be used for other phases of the program. Wise church boards are investing proportionately more money for leadership which means far greater usefulness of the building.

The nave should not be too wide in proportion to the length. Its width should not exceed one half its length. This has been one of the outrages in American church building—wide naves requiring an excessive roof load, more expensive construction, and increased height to avoid a squat appearance; the result being a "glorified barn" type of



Log Church

Left — Trinity Methodist Church, Chicago, Ill. Jansson and Stoetzel, Architects. West End View.
Modern materials in walls and ceiling eliminate use of plaster and insure correct acoustics.
Note clerestory wall and windows. Gallery omitted or may be added.

church. Proper proportion demands that the height of the side walls be increased as width and length are increased. It is difficult to provide a focal point for a square room and to avoid the impression of emptiness. It is more effective for the congregation to be seated directly in front of the chancel.

The acoustical results are better in a room that is greater in length than width. The voice travels directly forward with greater speed than the sound waves spread laterally.

The clerestory type of construction, with side aisles roofed separately, improves the proportions of the room. Some churches dislike seating late-comers behind a pillar and have, therefore, disregarded the many advantages and economy of wide side aisles with rows of pillars. The clerestory type of building eliminates, in proportion to the floor space, considerable volume from the heating load. Clerestory windows admit light to the middle of the nave. Excessively wide roof spans are avoided.

Galleries

Compared to a gallery, overflow seating space in the side aisles has many advantages. A gallery is a very questionable convenience. Some-



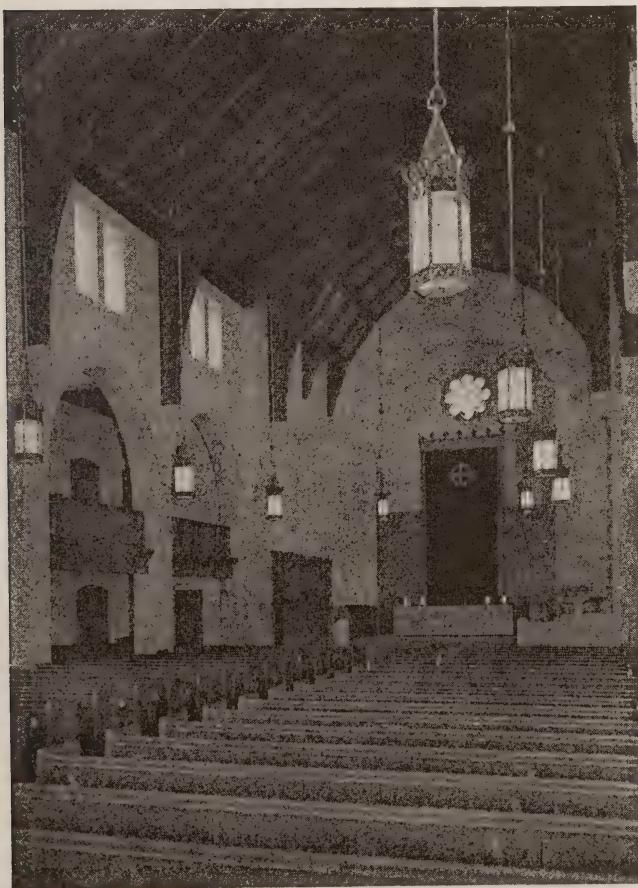
Wenner and Fink, Architects for Remodeling

St. Paul's Methodist Church, Newport, R. I. After removing false organ pipes and convention hall platform. (The oldest Methodist Church with a steeple.)

times the height of the entire building has to be increased several feet in order to have a gallery. Before deciding upon a gallery, consider the cost of the two stairways required for safety, and the number of sittings eliminated from the main floor plan by these stairways. Never extend the gallery out beyond the narthex.

Do not fill the entire floor area with fixed pews. The floor of a church should be level. Have a removable platform inside the pulpit if necessary, but never have a sloping floor in the nave.

**University Christian Church
Champaign, Ill.**



A. E. Wickes, Architect

The rich red dossal at the front of the baptistry and rose window give a most effective background setting for worship. A high clerestory.

Here is an example of building the Lord's Table on a scale in keeping with the proportions of the room and the high importance of the table.

The Chancel and Its Equipment

In this book we consider all the elevated space in the sanctuary beyond the space in front of the first pew as the chancel. Usually the chancel contains the choir.

In some churches the "sanctuary" is that part of the chancel which contains the altar and communion rail and does not include the space occupied by the choir.

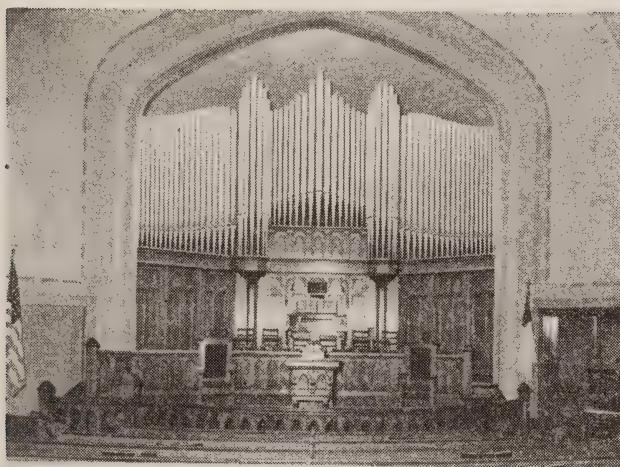
Platform or Chancel? The chancel is the most important part of the church, and its planning should be studied very carefully. The chancel arrangement rather than the concert hall or convention hall type of

Second Congregational Church, West Newton, Mass.



Allen and Collens, Architects

**Greenfield, Ohio
Methodist Church**



E. F. Jansson, Architect
E. M. Conover, Consultant

Before and after remodeling the platform into a Chancel. The false organ pipes, which some worshippers had to count every Sunday, discarded. The organ tone opening covered with maroon colored gauze stretched tight to the fine wood work. Note setting of baptismal font at left. Pews rearranged to provide center aisle for choir processional, weddings and general convenience. The open communion rail and center aisle indicate the Protestants' unobstructed approach to the Lord's Table. This improvement is typical of remodeling projects executed in hundreds of Protestant churches during the past twenty five years. No flags in the new sanctuary—only the cross.

platform has been found to be most satisfactory in churches of all types throughout the country. It is a practical and attractive arrangement. Without a chancel, a room may well be called just an auditorium or a meeting place, or hall.

A comparatively modern arrangement of having the choir face the congregation, with a subordinated position for the table has, doubtless, encouraged much of the irreverence and lack of attention which so many preachers have had to endure. No preacher should have to compete for attention during the sermon with rows of beautiful, and not so beautiful, choir members banked up in bleacher-like formation in front of the worshiping congregation. This arrangement is wholly illogical and out of place in a church. The choir should not face the congregation, as if on display, but it should be, however, visible as part of the worshiping congregation. The choir leader is, increasingly, becoming less conspicuous during the church service. The pulpit may be so placed that choir director, organist and console are hidden. Of course, some of the greatest choral singing in the world is done without the leader being visible to the congregation.

In the chancel the Lord's Supper or Holy Communion is prominently symbolized by the table or altar. Nothing stands in front of the altar or the table of our Lord. The chancel arrangement signifies the privilege of the worshiper to receive the Holy Communion in fellowship with other Christians.

Have Sufficient Space in the Chancel. No one would think of decreasing the official size of a baseball diamond in order to increase the seating capacity for the paying spectators even though thousands of would-be spectators have to be turned away. Yet churches, too often, limit the chancel area, and, as a result, the work of the choir, administration of the sacraments and conduct of effective worship services are definitely hampered. Let the nave be comfortably crowded with worshipers, but have sufficient space in the chancel to indicate importance of public worship and to facilitate conducting of the services.

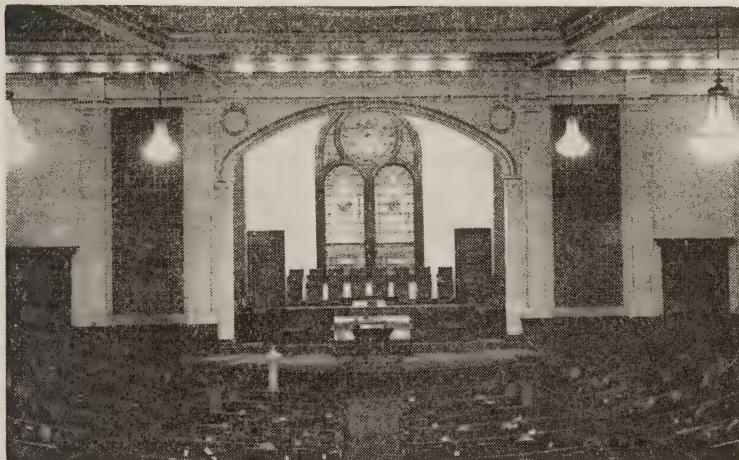
The chancel is a suitable focal center for the sanctuary. The arrangement gives a meaningful setting to each part of the service. It permits the administering of the communion service either in the congregational method or at the communicants' rail. The plan may be arranged with or without a communion rail.

The pulpit occupies a special position, designed exclusively for the ministry of preaching, and indicates the importance of that ministry in the Protestant churches. A baptistry with beautiful drapes fits perfectly into the chancel plan. The choir and minister should make a dignified entrance into the chancel at the center, rather than entering from the sides like players coming upon a stage.

Deciding Important Details. It should be possible to leave all details in plan and design to the architects and consulting adviser, but the

First Presbyterian Church

Knoxville, Tenn.



Barber and McMurry, Architects
E. M. Conover, Consultant

Top picture, platform before remodeling. The choir members faced the congregation offering competition for attention during the sermon. Several other distracting elements may be noted. Lower picture—the remodeled chancel, a mosaic in beautiful colors on the rear wall, specially illuminated.

minister and building committee should review the plans before they reach the construction drawing stage, to make sure that all arrangements will be satisfactory in every detail. These are some of the items which must be carefully analyzed before working drawings are authorized:

Altars. Height from the floor beneath the altar, 39 or 40 inches; length, 8 to 12 feet, not less than 7 feet in a small church—in small chapels within a church building, 5 to 7 feet.

Height above floor of the nave in large churches, 7 steps (35 to 42 inches), no more; for most churches, 3 to 5 steps.

A vista of length through the chancel is more important than the height of the altar.

The Predella (step in front of the altar). 36 to 42 inches in front; 6 to 8 inches at ends.

The Communion Table. Height, 36 inches; width, 24 to 30 inches; length, follow suggestion for altar. No step directly in front.

The Dossal or Dorsal. This draws attention to the focal point of the room. Height, 7 or more feet. Hang so as to show vertical folds, or make with vertical stripes. A more dignified effect seems to be given when there are no vertical folds.

The Reredos. A screen of wood or carved stone back of the altar.

The Triptych. A reredos about as wide as the length of the altar, with hinged shutters to close off the pictures during Passiontide—frequently used for chapel altars.

The Gradin. A shelf at the back of the altar.

The Cross. It may be of brass, carved oak, wood polychromed or finished in gold leaf. A plain wooden cross is better than a cheap looking production of any kind.

The Candlesticks. To match the cross. Never to be as high as the cross.

They should be designed by the architect in a size and design in keeping with the entire setting.

The Missal Stand. To hold the open Book upon the altar or table. May be of wood or metal.

The Baptistry. Depth and width depend upon method of administering the ordinance. In some churches the candidate kneels, in others he stands in the pool. Have the curb about 8 inches above the communion table. It can be a very significant focal center for the sanctuary, signifying regeneration and the gateway to the Faith.

The Font. Should be of stone, or wood. Have a drain leading to the earth. Height, about 36 inches; not less than 24 inches across; base about 20 inches in diameter; shaft about 14 inches. Should occupy a fixed position, with a cover. May have a kneeler or prayer desk in front.

The Rood and Rood Beam or Rood Screen. A means of demarcation between the nave and choir (or chancel). The rood or cross may be suspended from the ceiling on chains sufficiently strong enough to

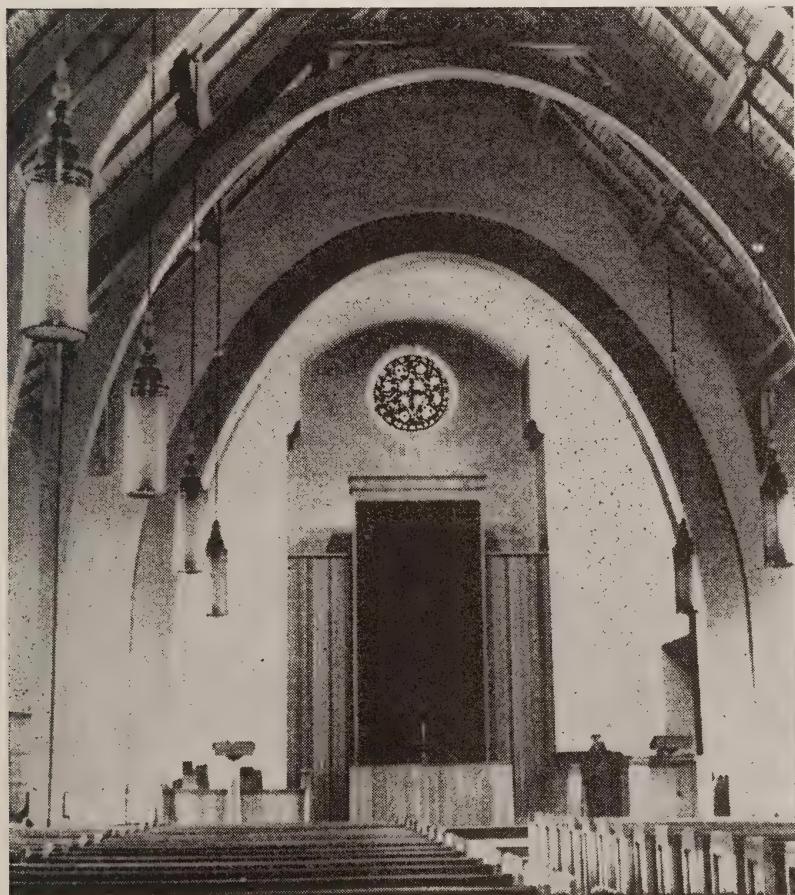
support the heavy cross. The rood beam or screen offers excellent opportunities for the use of art in the church.

Clergy Seats should be fixed, bench-like, against side walls of chancel.

(The minister is not seated as though presiding over a meeting or conducting a forum.) High-backed, ornate chairs are out of place in the chancel. They belong to a lodge room or some such place.

A Prayer Desk may be placed in front of the clergy seat. The desk has a

Central Christian Church, Kansas City, Kansas



Wickes and Kriehn, Architects

A rose window in rich colors gives an eternally satisfying "high point" to a sanctuary composition. (The view from the pews eliminates view of bare wall between dossal and rose window.)

A rich red dossal fabric closes the front of the baptistry. The functionalism of the chancel arrangement is here well illustrated. The open timber ceiling increases the sense of height. Laminated wood trusses.

Lighting fixtures direct the light downward to where it is needed.

sloping top—8 to 12 inches wide—with a narrow strip to hold books; 30 to 32 inches high to lower edge; a shelf underneath; and a kneeler that will fold back (noiselessly).

The Pulpit. In the days of our ignorance (for which the Good Lord forgive us) a convention hall type of platform or a box-like speaker's stand would be called a pulpit. A pulpit, wherever its location, is a separate, dignified piece of churchly equipment which symbolizes and facilitates the ministry of preaching. Throughout Christian Church history the pulpit has occupied various positions while the altar or communion table remained in a fixed position in each church, and usually in the same position in all churches. Have the pulpit not less than 40 inches wide inside. It must be neither a narrow barrel nor so bulky that the preacher appears to be driving a ship. Inside height 37 inches to 39 inches. Removable platform for preachers of short stature. Shelf for a watch. Book board about 12 to 16 inches by 13 to 17 inches in size. Avoid a light fixture on the pulpit or lectern. Have the chancel sufficiently lighted so light fixtures need not be attached to pulpit, lectern or the choir singers' books. If a microphone is needed, have it hidden from view. Let the height of the pulpit from the floor be reasonably fixed by the architect. Don't have it too high. Let the top edge be visible from the rear seats. Do not place it too far to the side of the nave. Extend the pulpit floor a few inches to the back.

Location of Pulpit and Lectern. There is no traditional rule as to which side of the chancel the pulpit or lectern should be placed. It seems convenient to have the pulpit and organ console on the side opposite the side of the choir having the larger number of singers. (The console should be opposite the organ chamber tone opening.)

The Lectern. Many churches whose forebears in extreme Protestant reaction discarded or lost to the other side of the ocean, the lectern and other items of value are now reestablishing this very noble and significant equipment. The lectern (from the Latin, legere, lectrum, to read) emphasizes the noble ministry of reading from the Word of God. It indicates that the reader brings forth to the people wisdom and instruction from resources greater than his own.

In some churches the congregation reverently stands during the ministry of reading from the Gospels. The lectern is to be designed by the architect and is in harmony with the total architectural environment of the room. The height of the top should be adjustable. Have no light fixtures on the lectern. The lectern offers an opportunity for good craftsmanship. Many ancient lecterns are portable or free standing. The eagle form of book board symbolizes the Gospel messenger.

Communicants' Rails formerly marked a demarcation between the nave and people and the sanctuary for the priesthood. After the Reformation in some communions the communicants' rail was moved back to the altar and the Protestant worshipers approached the altar or table standing in the most sacred part of the building. The rail was dis-

carded in some denominations. However, the rail serves very practical purposes, and the present trend is toward its restoration, especially in the chapel. It invites the worshiper or penitent to kneel before God. In Protestant churches it is not a railing in the sense of shutting persons away from any area, but indicates an invitation to approach the Holy Place and to have fellowship with God. Neither is it just a rail but a lengthened *prie-dieu* (prayer desk). It is built for a person to use when kneeling and should have a flat slanted top.

Height above cushion, 24 to 25 inches at highest point; the top, 6 inches wide and slanted toward the kneeler. (A slanted base upon which the kneeling cushion lies, 14 to 16 inches wide.) A portable section may be inserted at the center opening for communion services.

The Credence. A small table or shelf to hold the communion elements

Rosedale Park Lutheran Church, Detroit, Mich.



E. Confer, Architects

Usually a chancel contains the choir. In this church the choir is to the right of the chancel, seated facing the chancel.

Richly colored fabric in the panels of the reredos blend beautifully with the rose window. This arrangement provides a splendid composition with no danger of glare in the eyes of the worshipers. Concrete block walls faced with brick. (No plaster on walls or ceiling.)

before they are consecrated. The alms-basin and offering plates may be placed upon it. Never place empty offering plates on the table or altar!

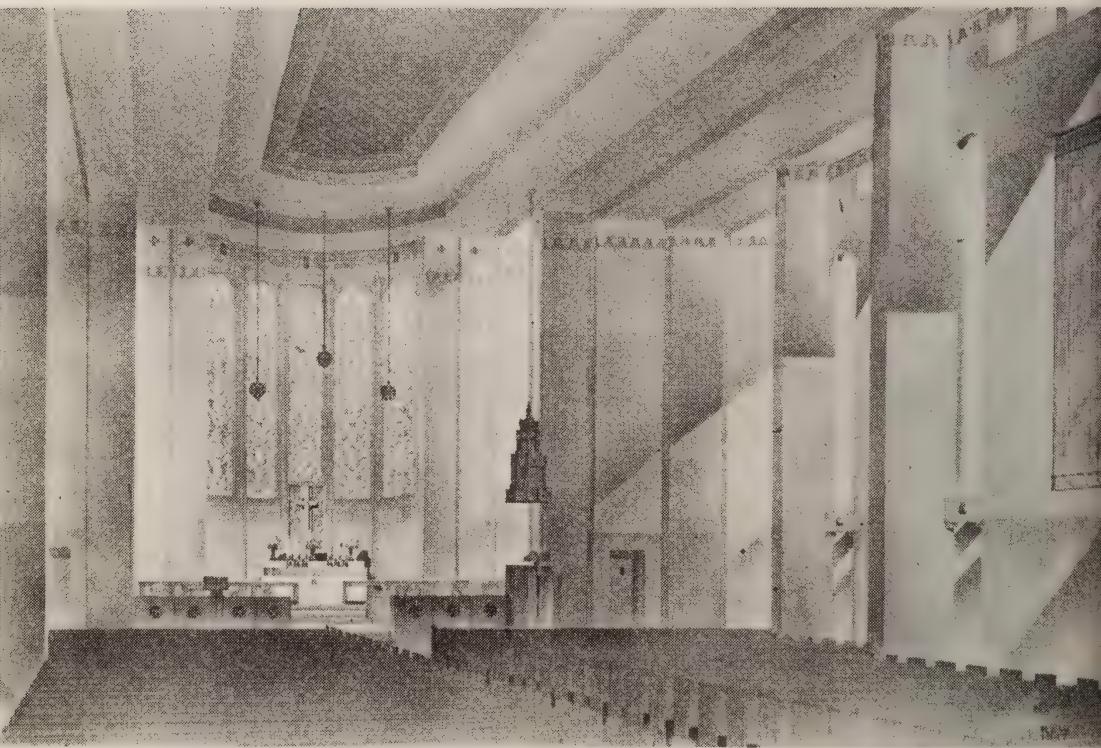
Piscina. A very important piece of equipment, usually a niche to hold a basin of water with which the minister is to cleanse his hands before administering the communion leaving the congregation in no doubt.

Sanctuary Lamp. Indicates welcome; eliminates empty aspect of the room.

Design for Nave and Chancel

Westwood Methodist Church, Los Angeles, California.

Approved 1948



Thomas & Wagoner, Architects
E. M. Conover, Consultant

The chancel window will be like an illuminated mosaic of glass richly colored so there will be no annoying glare in the eyes of the people. The communion rail is located at the altar, a return to ancient tradition, rather than in front of the choir at a distance from the altar as in some Methodist Churches. Note that the three sanctuary lamps are shielded in front. Light from hidden sources serves the choir and nave.
See page 45.

Before and after remodeling a platform into a Church Chancel



An ecclesiastical red dossal cloth. Pews rearranged to provide center aisle. Pulpit just off of center aisle, but may hide view of altar from some worshipers.

Interior of English parish church. Note beautiful pulpit at left



Combination chancel screen and rood beam. Brass lectern at right. There has been no established rule as to which side of the church pulpit and lectern are to be placed.

Rooms Auxiliary to the Sanctuary

The Narthex. The space in the church building that one enters immediately upon leaving the out-of-doors should be more than a dark, narrow vestibule. In ancient Christian churches, the narthex, which was a closed porch, accommodated great companies of pilgrims and persons who wished to attend Christian worship and preaching but who were not yet members of the Christian community.

The narthex must give a sense of welcome and express a promise of uplift that one expects to find in the worship experience. The most careful attention must be given to flooring, decoration and lighting the narthex.

In the plan which places the church school rooms at the rear of

The Church in the Highlands (Congregational) White Plains, N. Y.

Schulz and Weaver, Architects



the nave, the narthex must be especially roomy, for it forms a central traffic distribution space for two or more sections of the building. It is important for those coming from the church school rooms that this space be suited to mental and spiritual preparation before entering the main worship room of the church.

The Sacristy. The sacristy is used for storing and cleansing the communion service and sometimes for the minister's robes and books, and other equipment used in the service. It is best not to have the communion service stored with the kitchen and dining room equipment. The sacristy is usually adjacent to the chancel, and should be equipped with a sink and hot water supply.

The Pastor's Room. Formerly, the sacristy was also the pastor's room

First Baptist Church, Bradford, Pa.



North and Shelgren, Architects

A splendid illustration of a "modern" treatment in general harmony with a more traditional order. The chandeliers however seem to be out of keeping with the modern treatment and equipment. Note functional arrangement of the chancel with baptistry at center with red dossal, communion table, pulpit, lectern and choir.

for his preparation just before the service. Where there is a processional of the choir and the minister into the nave, it is more convenient to have the pastor's room easily accessible to the rear of the nave. The pastor's conference room may serve also as his retiring room before the service. There must be a closet for hanging robes. A lavatory should adjoin the sacristy and the pastor's room.

Choir Rooms. The work of the music department is an especially important factor in American Protestant Church life. Beside the choir assembly room, there should be robing rooms for men and boys and women and girls. Cupboards for robes, music, and books should be provided. All of this equipment should be noted in the very first program that is handed the architect. Closets, cupboards, drawers, etc., may be "built in" during construction of the building. Have the choir



Room for the minister of music and choir, Trinity Methodist Church, Youngstown, Ohio.

room treated acoustically and sound proofed so that the choir may sing at full volume during rehearsals. Allow 10 square feet per person in the choir room besides the robing room space.

Location of the Choir Room. Never have an inadequate choir room located adjacent to the chancel. It should be located so that the choir

may enter at the center aisle for a processional, and also, if desired, entrance may be made at the front of the nave.

Cloak Rooms. Place coat rooms at convenient places near the narthex. If the chancel is at the end of the nave opposite the parish house section of the church building, it is more convenient to provide spaces to deposit coats and hats before entering the nave than when the chancel is at the church school end of the building. The ceiling height of these coat rooms need not exceed 8 feet. Rooms located just beneath the narthex are, however, very convenient if their floor level is not far below the narthex floor.

Furnishings and Equipment in the Nave and Chancel

Seating in the Sanctuary. While the congregation should be seated comfortably and conveniently, the principal objective of a service of worship is not to entertain listeners who are seated cosily. Lounging in a worship service is not to be encouraged. (A dining room chair is not built for fireside lounging, yet is one ever uncomfortable in a sensibly designed dining room chair while partaking of a good meal and interesting conversation?) Successful listening to the sermon and other parts of the service require a certain amount of concentration. It is not desirable for the audience to relax completely. One is reminded of the listener in the Scotch church so intent upon receiving the sincerely preached sermon that he was impelled to arise and stand until the end of the sermon. (That was sermon listening!) Avoid pew ends that encourage lounging or permit extending the elbow into the aisle.

Church seating should be designed and purchased with a clear understanding of its function, and should not be bought upon a salesman's representations alone. We question buying pews from a salesman at all. The pews and all of the equipment in the sanctuary should be designed by the architect. It is unfortunate that so many well-designed sanctuaries are filled with unsuitable pews, purchased without consulting the architect. Pews should be BUILT to last for the life of the building. The manufacturer should furnish a bonded guaranty of durability and quality. The material and the work of installation should be approved by the architect. After the design by the architect has been approved and the manufacturer selected, you may have samples set up for final approval.

Pews should be spaced not less than 34 inches from back to back; 35 or 36 inches is better, especially when kneelers are used, although 32 inch spacing is common usage. 20 inches per sitting makes for greater comfort rather than the 18 inches usually estimated. Allow 22 inches to 24 inches per sitting in the choir pews. Space choir pews at least 36 inches from back to back. Shelves may be placed on choir pew backs to hold books and music. Examine and measure the pews and their spacing in other churches, and decide for yourself the best arrangement.

Usually a screen is built in front of the first pew, but sometimes it is very convenient to have the front pew unobstructed. Screens are usually required in front of the choir pews. Book racks and envelope holders should be constructed as part of the pew. Some suggest that this equipment be equal in length to the length of the pew. A shelf beneath the pew for hymn books may be considered, if care is taken that it is not an annoyance. Kneelers may be attached to the pews so that they will fold back noiselessly.

Several ornamental designs on pew ends, if any, should be used rather than the same symbol or design repeated throughout the entire length of the aisle.



Wenner & Fink, Architects

Church of God (Anderson, Ind. Hdqrs.)

Washington, D. C.

X

THE CHAPEL

The chapel as we consider it is a room within a church building or a unit of the church plant or connected unit in addition to the main sanctuary designed and furnished for worship and devotional purposes. One of the significant movements in American church life is the growing popularity and usefulness of the chapel.

Increasingly, the chapel is becoming the most frequently used meeting room in the church building. In some churches, as many as four weddings are held in the chapel on one Saturday. Special communion services, baptismal services, classes in worship, prayer services, and others of a religious nature are held in the chapel.

What Makes a Room a Chapel?

First of all—beauty. This does not mean elaborateness or costly equipment. A bit of color, a picture or symbol, a candle can transform a drab room into a sanctuary. Effectiveness of environment is provided. Above all, there must be good proportions in the dimensions of the room. The length of the chapel should be at least twice its width, and the height should equal the width. The focal point of the room should be at the narrow side opposite the entrance, which would be at the extreme rear of the room. This “worship center” may be a communion table, or an altar with a cross placed upon it. The altar or table may be “backed” or shielded by a drape of rich colors (a dossal cloth). Blue, gold, red and purple are colors with symbolic meaning. Good stained glass, of course, will glorify any room. The universal Christian symbol, the cross, signifies the purpose and nature of the room. Lighted candles induce attention, calm and devotion. There must be meaning in the place. Meditation and prayer are to be encouraged.

The chapel makes possible “the church with an open door,” without the necessity of opening the larger sanctuary for individual worship. Where a beautiful chapel is available, it is found that many seek to make it a sanctuary for private devotions. In one city, the undertaker’s chapel, which is the most effective room for worship services in the community, has been used for many weddings as well as funerals.

In many existing buildings a well proportioned room is available which can be made into a very effective chapel. It is quite proper for the pulpit and communion table to be placed prominently in the main sanctuary. In the chapel, however, devotion should be the dominant note. Symbolism and rich color may be used. An altar more intimately indicates the place of sanctuary and refuge, and is thought by

many to be suitable in the chapel, even when a communion table is used in the main sanctuary. In a small chapel, both lectern and pulpit are not required. It is not necessary to have the room as well lighted as the sanctuary. The principal focal center should be well illuminated; the rest of the room may be left without artificial lighting when the room is open for private worship.

It is a splendid thing to make available records of music, hymns, sacred readings and prayers for individual use in the chapel.

A baptismal font or baptistry (as in the chapel of the Riverside Church, New York) indicates the special importance of the chapel for baptismal services.

More frequent communion services may be held in a chapel, thus

**Chapel, First Baptist Church
Durham, N. C.**



G. F. Hackney, Architect
E. M. Conover, Consultant

A chapel formed by remodeling a church school room. The chapels in church buildings are used as an assembly room for Junior High and High School Departments meeting separately, Junior church, weddings, funerals, baptismal services, a variety of religious meetings and for private devotion and meditation.

helping to solve the problem of providing for this sacrament in churches with large congregations. Several so-called "non-liturgical" churches now have weekly communion services.

Religious Educational Values in the Sanctuary and the Chapel

The unity of the entire church plant is seen in the increasing use of the nave and chapel in the religious educational work. There is a growing conviction that Christian education, to be effective, must be centered upon the worship of God.

Children are very susceptible to the influence of beauty. An eleven year old girl turned and looked upon the great rose window in the Cathedral of St. John the Divine in New York, and exclaimed: "Oh, beautiful!" Pastors and teachers are wise to make use of the church building in explaining to children the reasons for the plan of the sanctuary and the purpose of various furnishings. Symbolism in the windows and other parts of the building is a valuable means of Christian teaching. Children should be taught that it is a great privilege to enter the main worship room of the church and that they, too, have a place in services held there.

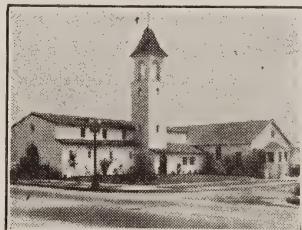
Many pastors conduct classes in preparation for active church membership in the nave of the church, where the sacraments and other phases of Holy Worship may be explained. There should be no objection to having the church heated for small groups. Jesus did some of his most effective teaching with one person in the congregation.

Frequently, the church chapel is used for the assembly and training in worship by church school groups. *Do not assign the chapel for the exclusive use of any one group during the entire church school period.* Different classes and departmental groups should be permitted to visit the chapel and to conduct their services of worship and devotion there.

Meeting the Implications of Comity. The chapel helps to provide a varied ministry to many different people within the same Christian fellowship—and to people when in different moods and with changing needs.



A class in St. James Lutheran Church, Ozone Park, N. Y., learn about glass and symbolism in the nave.



CHURCHES THAT ACCEPT A COMITY ASSIGNMENT TO MINISTER TO THE RELIGIOUS NEEDS OF A COMMUNITY SHOULD PROVIDE FOR THE USAGES TO WHICH THOSE OF DIFFERENT CHURCH BACKGROUNDS ARE ACCUSTOMED AND WHICH THEY HAVE BEEN TAUGHT TO OBSERVE.

There should be provision for instrumental music of the kind and quality through which the users are to be educated to a love and appreciation of the musical classics of religion. Portable pipe organs are available for chapel (or small church) use so it is not necessary to use electronic instruments for reasons of economy. There should be space for a small choir.



Sundt, Wenner and Fink, Architects
W. H. Thomas, F.A.I.A. & E. M. Conover, Consultants

The Chapel, First Methodist Church, Germantown, Philadelphia, Pa.

If there is no children's chapel, one end of the chapel might be furnished as a children's devotional center, with appropriate pictures and books.

The Children's Chapel. Increasingly, children's chapels are being provided. This is not an experiment. The children of the Second Congregational Church in West Newton, Massachusetts, have had the privilege of a beautiful chapel for more than twenty years.

Some religious educational workers do not recommend a children's

**The Chapel in Trinity Methodist Church
Youngstown, Ohio**



Goodwin and Damon, Associated Architects
Wenner and Fink, Architects

Where a chapel is provided, it is usually used more often than any other room in the building except the offices and conference rooms.

This chapel is available for use by individuals or groups of all creeds or races, as scheduled by a nondenominational committee on which the Jewish, Roman Catholic and Protestant faiths are represented.

chapel, on the ground that too formal a worship program is not suitable for the experiences of children. However, children's chapels, carefully designed and equipped suitably for the needs and responses of the age groups who are to use them, have been appreciated by workers and pupils. The use of the chapel does not prohibit informal or spontaneous worship in other rooms. One chapel room may be used by two departmental groups at different times during the church school session for assembly and worship, thereby saving the cost of one as-

**The Chapel of The First Methodist Church
Germantown, Philadelphia, Pa.**



Sundt, Wenner and Fink, Architects
W. H. Thomas, Consulting Architect

Side view of Chancel. The furnishings of the chapel may sometimes be of more excellent quality and character than those in the main sanctuary. Panels may be removed from the woodwork of the wall, making the room beneath the organ available as a family room for funerals. For weddings it is used as the bride's room. Frequently three weddings are held on a single Saturday in this chapel.

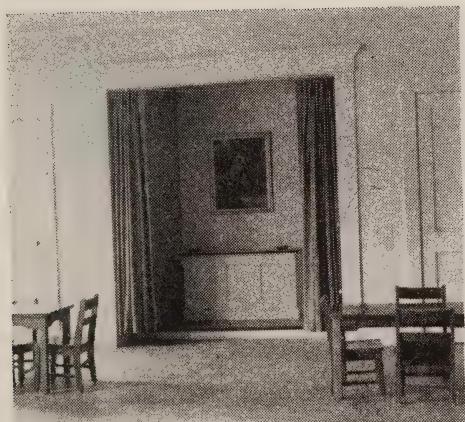
sembly room. The growing trend to place "worship centers" in church school rooms is in keeping with an appreciation of the importance of a spiritual content in Christian education.

Furnishing the Chapel. The choice of chancel furniture for the chapel—communion table, altar, baptistry, communicants' rail, and kneeler cushions—will be determined by the practice and ideas respecting worship which prevail and needs of the several groups to be served. The seating for worshipers should be definitely church-like in character and may consist of pew-like benches, cathedral chairs or chapel pews, with height suited to the groups by whom they are most often to be used. It should be remembered, one may sit comfortably on seating

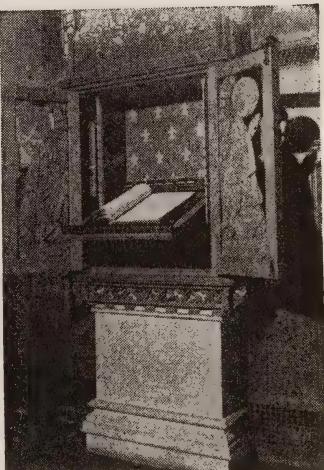
Gardena, Calif.

R. Inwood, Architect

Chapel at Methodist Latin-American School.

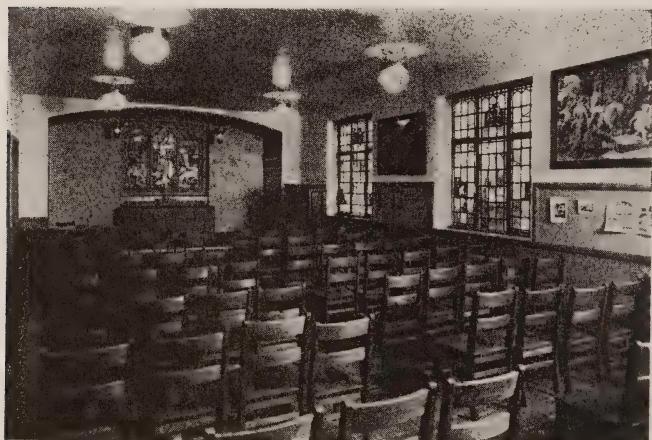


A multiple purpose room arranged for Sunday School.

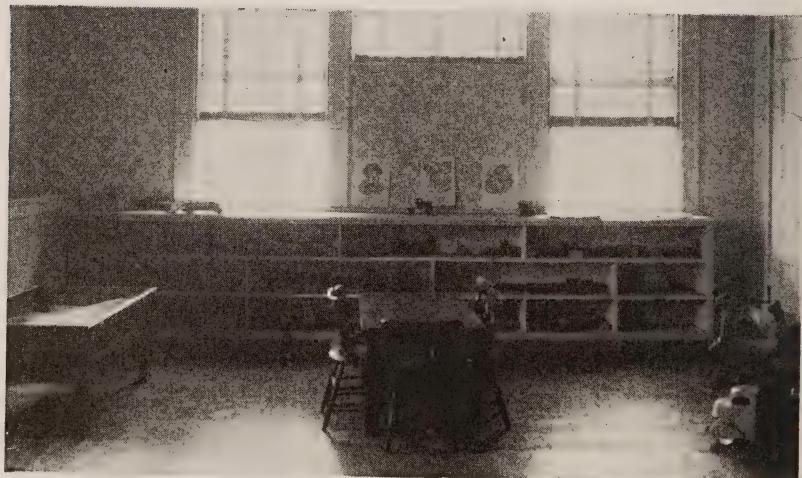


lower than necessary but only with discomfort can one sit on seats higher than required. Hence, if the room is to serve as a chapel for the children's use, lower seating than that used in the main sanctuary is necessary. Pews may be provided with cushions like those of the church itself. Open back chapel pews of attractive design can be provided at a cost no greater than equal accommodations of chairs of comparable character and finish. Either chapel pews or chairs are movable and permit of rearrangement for occasional formal processions or pageantry.

A Chapel Type Assembly Room
Trinity Methodist Church, Albany, N. Y.



A Kindergarten



XI

THE ACOUSTICAL DESIGN OF CHURCHES

A correct acoustical condition in any room need no longer be left to chance. The laws of sound are not in the realm of mystery as a noted architect remarked a few years ago. Because of scientific advances in this field and the variety of manufactured products now available for correcting the acoustical qualities of a room, one may have complete confidence that the rooms will be effective and comfortable for speaking and music.

The acoustical characteristics of a room are satisfactory when a speaker in any part of the room, without straining his voice, can be heard distinctly by all. There must be a certain degree of resonance and liveliness in the room, and yet all sound waves should die out in about two-tenths of a second so that there will be no disturbing echoes.

The leader of the church building program should see that the problem of acoustics is properly handled. However, no one would wish to guarantee successful acoustics in a room, for much depends upon the quality and effectiveness of the original sounds. Many speakers seem to have such weak or untrained voices that they depend upon a sound amplifier even in small rooms.

Sound from a speaker or musical instrument travels out in waves, and usually with great velocity. As a result it is reflected back and forth rapidly between the walls. This causes overlapping and confusion of sounds. If a speaker stands close to a reflecting surface behind him, the reflection is almost simultaneous and re-enforces the sound, but if the reflecting wall is more than twenty-five feet from the speaker, confusion is likely to result unless there is an element of acoustical correction in the surface area of the room.

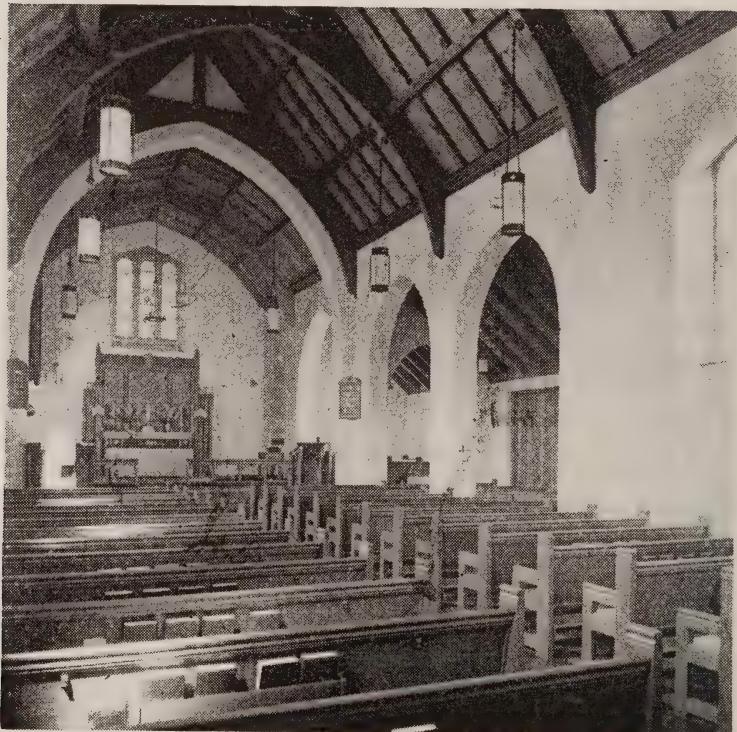
A curved wall or ceiling produces a focusing effect and increases the likelihood of trouble. A curved sounding board above the speaker's head is bad. A Gothic type ceiling with open timber construction is good for acoustical results. The woodwork breaks up the sound waves. Sound-absorbent material is more effective on a flat than on a curved ceiling. If walls and ceilings are made of hard sound-reflecting materials, little of the sound is absorbed and overlapping of the reflection results. For good acoustics, the sound that we wish to hear should reach us with suitable intensity and distinctness, then die out and leave the field clear for the arrival of the next sound.

When a room is filled with an audience, particularly when heavy clothing is worn, much of the sound is absorbed and the acoustics are greatly improved. But the room itself should be so designed as to avoid

defective acoustics, for speakers and musicians are entitled to the confidence which comes with the knowledge that the room is correct for speaking purposes.

It is important to have the acoustical condition correct for music. The amount of sound-absorbent material to be installed is determined by careful calculation. Too great an absorption of sound will be unsatisfactory, since the room will have a "dead" effect lacking in reverberation. Sound-absorbent materials should be placed upon reflecting walls, particularly those at a distance from the speaker, and the walls about the speaker or musicians of sound-reflecting material. A room of rectangular shape is preferable for good acoustics, provided the sound comes from a narrow side.

St. Peter's Lutheran Church, Cleveland, Ohio



C. A. Fichter, Architect

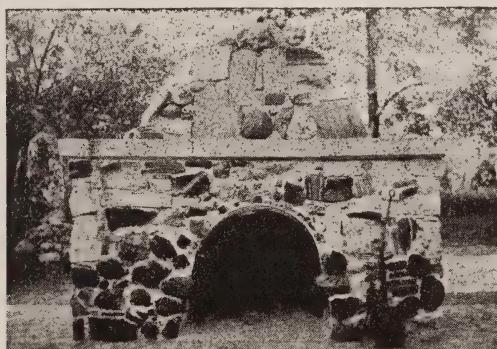
The choir is at the right of the chancel, seated facing the chancel. A baptistry chapel at the right provides over-flow seating. The strip of bare wall between the reredos and chancel window is not seen by those seated in the pews. Richness of color is added to the reredos by the fabric in the panels. Organ loft at left of the chancel. The organ music is well heard by the organist, choir and congregation. Acoustics perfected by the sound absorbing ceiling material and the open timber work which helps to break up the sound waves. Good example of providing for the functional purpose of the room.

Churches with unsatisfactory acoustics should have the condition corrected immediately. The outstanding manufacturing concerns specializing in this field will be glad to send engineers to make recommendations, which are likely to be in the nature of increasing the proportion of the sound-absorbent surfaces in the room. We should, however, advise the employment of a sound engineer who has nothing to sell. In badly designed rooms, particularly those shaped like a clam shell, the problem may be difficult. Smaller churches may improve the acoustics by the use of heavy hangings at windows and doors, and especially at the rear of the room. The use of sound amplifiers simply intensifies the problem in some situations where more absorption rather than more noise is needed.

When employing an architect, inquire as to the ability of his staff to insure good acoustical conditions in every room. The architect should present an engineer's report on the acoustical effectiveness of every room in the building before the plans and specifications are approved.

Every room should be protected against sounds from adjoining rooms and should have walls and ceilings which will absorb and confine sounds within the room. Proper attention to these details will help to prevent noisiness throughout the building, and make it possible to use all the building all the time.

The kitchen, too, should be so treated that sounds will largely be absorbed within the room.



An outdoor fireplace



LATIN - CROSS -
(CONSTRUCTION)



- CIBORIUM -
- THE LAST SUPPER -



- THE PHOENIX -
- THE - RESURRECTION -

XII

THE ARTS IN THE SERVICE AND EXPRESSION OF RELIGION

Protestantism has lost immeasurably in eternal values through its exclusion of Beauty from the House of God.

A certain idolatry of words seems at times to have characterized Protestant Christianity. It has been assumed that a spoken or printed word has magical power to implant true motivation in human character. Millions of books have been printed for every effective picture, yet sometimes, one picture may be worth a thousand words. Too often, the dramatic appeal and the effective influence of Christian art have been ignored and a great treasury of inspirational power remains unused. However, today there is an encouraging new interest in reaching the human soul by visual as well as by verbal means.

Art is human thought and emotion expressed in physical form. The finest of art may be called into the service of the worship of God, the Creator of all beauty. The highest of all art will express the love and adoration of God.

Art is meant to help us appreciate the beautiful, which is one form of the good. Appreciation of beauty is opposed to materialistic utilitarianism and therefore is an aid to spiritual appreciation and understanding. The arts testify to the beauty and goodness of human life, and are used to remind us of God and the great realities of Christian faith.

Painting, sculpture, mosaic work, carving, landscape architecture, together with the crafts of glass making, wood carving, metal work, embroidery, music—all reach their noblest achievements when called into the service of religion. We do not consider that there is an essential severance of the crafts from the arts in religious work. Good art diverts the mind from the subjective to the ideal. Beautiful art whether in music, painting or sculpture, does not encourage idolatry. The Church needs good art, expressive of essential beauty as a means of repairing damage wrought by stress and strain in the bare matter of living in a mechanistic, noisy and competitive world.

Religion needs the arts to create fruitful impressions, to cultivate reverence, symbolize truth, stir the imagination, and stimulate resolution. The aim of religion is not only to convert and redeem but also to develop unified and devout personality.

Protestantism has lost immeasurably by neglect and exclusion of the ministry of art. We may hope that the world will not have entirely turned away from the Church to other agencies for that ministry to the soul that is possible only through art in its finer expressions. Art, or what

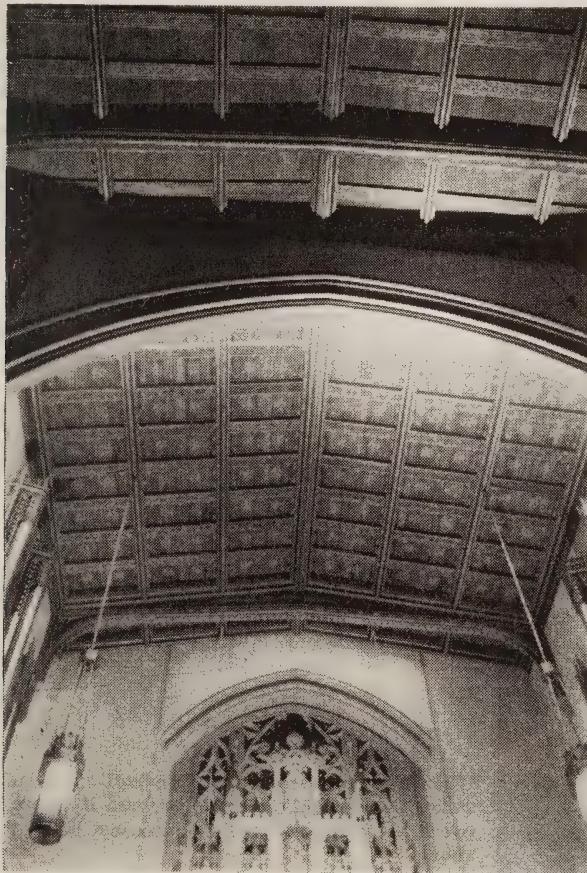
in a materialistic and secular age passes for art when unmotivated by religion, can attempt to feed the soul only on husks.

The soul of man was made to dwell in the beauty of holiness. Ugliness and the grotesque are repulsive to sensitive souls and exclude the divine realities that seek human dwelling places.

The fine elements in the Christian religion—truth, goodness, harmony—are effectively expressed in art. The attention is potently caught and held by these representations in sound, color or form. Art is the means for the most intense expression of the inner life of man. The language of art is universal and unifying.

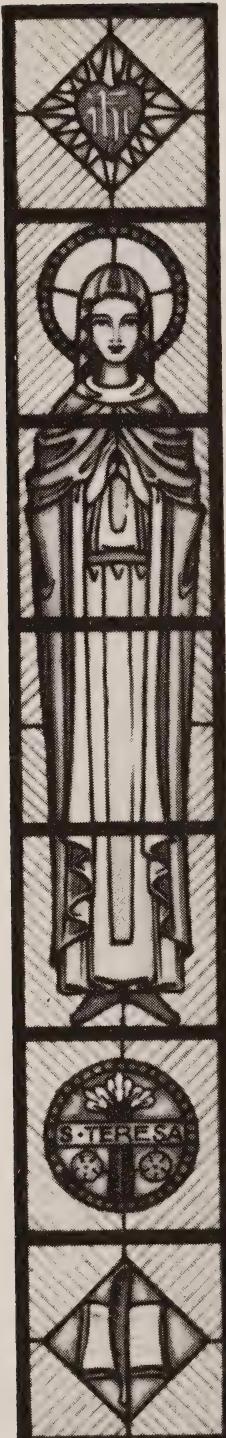
Protestant churches are beginning to realize that the language of the Spirit is to be spiritually discerned. There are many indications that the

Trinity Methodist Church, Albany, N. Y.

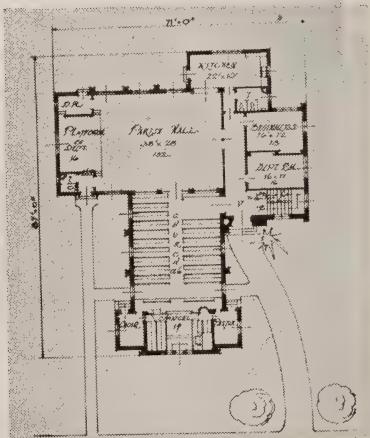


Sundt, Wenner and Fink and Thomas, Architects
Conover, Consultant

Upper part of Mankato (Minnesota) marble reredos and chancel window and poly-chromed chancel ceiling.



An outdoor worship center increasingly is considered an important part of church equipment



This plan places the fellowship hall on the main floor where it has a sufficiently high ceiling and its space is available for overflow seating. There is a second floor over the smaller rooms.

An example of contemporary window treatment. A combination of colored antique and modern English architectural glass.

Wallis-Wiley Studio

adoption of art as an aid in religious education and culture will be rapid and sweeping. Textbooks on religious education now give attention to the study of religious art, including church architecture. The criticism and appreciation of art have become recognized as essential subjects in public school and church school curriculums. We surround our children in the elementary department rooms with products of good art rather than the crude representations all too common until a few years ago.

The Redemption of Art—"Modern Art"

In recent times much work alleged to be art but which reflects ugly materialism, lack of inspiration and loss of soul has been much publicized. One may disapprove certain horrible examples without condemning all "modern art." To be good—art must have a worthy motivation. Religious life and thought provide a needed source of inspiration for art.

What Is Beauty?

Beauty consists in symmetry, order, proportion, harmony and unity with variety in fitness and expression of the ideal. Beauty is more than pleasure, more than happiness. Pleasure and occasions for happiness are separate and irregular, while Beauty is constant.

In the worship of God, the arts find their highest expression and their supreme opportunity for correlation. Each of the great arts—poetry, music, architecture, sculpture and painting—needs the others in order to render spiritual enrichment. They can be the means of giving expression to the desires and triumphs of the soul of man.

Will the Church Employ Artists?

Many young people wish to devote their lives to religious art and ask whether the Church will support them if they enter a career devoted to art. In the local church schools, hobby clubs, and youth institutes, art again will have the breath of divine life breathed into her cold body and when churches become filled with the Spirit and when worshipers will think and pray and will not limit their religious exercises to careless, thoughtless, comfortable listening. Doubtless if religious agencies are to make larger and reverent use of art, the Church itself will have to support schools of art and not be at the mercy of the "art" schools that treat ugliness as something to be adored and spiritual beauty something to be ridiculed.

We must encourage art, but great care must be exercised in choosing objects for the sanctuary and church school rooms.

Ugliness, triviality, and vulgarity brought into the place of worship do positive spiritual damage. The Church should exercise control in selecting objects for memorials so that they do not detract from the effectiveness of the sanctuary.

1. GLASS FOR THE CHURCH

The inspiration given by religion to art is gloriously demonstrated in the history of stained glass. The Church has been the one patron of

consequence of this great art. Here, indeed, art has inspired the worshiper; stimulated the highest spiritual energies; provided a means of expressing the highest values of the personality, and added to the joy of human existence.

The effect of good glass may be likened to music. The luminous spaces, vibrant with color and light, play upon the consciousness of the soul, helping to bring it into harmony with the Eternal Source of Joy and Light. With such possibility of achievement how unfortunate it is to fill these spaces with anything that clashes with sincere religious feeling.

The great glory of ancient glass belongs to the thirteenth century. Very old glass becomes pitted and otherwise affected by the weather and climate so that it takes on an interest that age alone can give. The vandalism of the two world wars which destroyed so much wonderful old glass has robbed future generations of irreplaceable beauty.

Window glass is very important in giving character to a building and, often, determines its spirit and atmosphere. However, this element of church architecture has been cruelly misused and it demands very careful consideration by every leader in church building. A school of decoration better adapted for the bar-room ran riot in our decoration and glass work during the forty years prior to 1920. In nothing else is bad taste so glaring and objectionable as in glass. Much of the ugly glass of this period was imported from Europe. Since 1920 much of the finest glass in the world has been made in the United States (of America).

Strictly speaking, the window is primarily for the purpose of admitting light and not for the display of pictures. When the primary purpose is overlooked, errors are sure to result. Stained glass, an art in its own right, is principally decorative and should be limited to this function. The stained-glass maker who executes a marvelously colored picture fails to perform his real duty. It is not his function to rival the artist who uses canvas for his medium. It is not his province to display great paintings but to produce a translucent decoration that continues the flat surface of a wall. We know that the glass is thin and flat, and should not deceive ourselves by assuming that we have a reproduction of landscapes—sheep with steel rods across their eyes, and the pictures stretching across the structural divisions of the window. Perspective is out of place in window glass.

A picture may not always suit one's mood, but if it is in a window, it demands attention. A window of formal work or of mosaic or antique design, if beautifully colored, allows one to make his own mental pictures—allows the music to play to his soul. Hence the splendid effectiveness of a window of sparkling non-glaring glass in the chancel of the sanctuary or chapel.

Stained Glass Today

Now in the present hectic period of human history there is much publicizing of the bizarre and peculiar in colored glass. Some churches will adopt a glass program which, when the seething of the times settles

down, will appear to mark the confusion and lack of spiritual quality in the passing (in a few years we hope) phase of the long suffering world's history. The vast majority of congregations, however, still require beauty in church art.

Excellent stained glass like great music will continue to enrich the soul of the worshiper. A much publicized architect thinks we should abandon this noble art and in this machine age use some kind of machine-made glass. The Church as the conservator of religious faith can conserve the soul of the artist and craftsman by employing their talents and save them from becoming tenders of machines.

There is a commendably increasing use of glass and color in secular building which makes it even more important for the church to maintain a spiritual idealism in its material expressions.

Formerly some churches allowed themselves to be influenced too much by the wishes of a donor who if tactfully handled would usually have been glad to have had his gift conform to the standard and design of the general glass program set by the architecture of the building.

Selecting Stained Glass

The entire glass program should be placed in the care of the architect at the very beginning of the planning. We must remember first of all, that glass is a vital part of the architecture of the building. The glass manufacturers should be selected with the counsel of the architect. Any manufacturer can employ an artist to make attractive pictures just as any architect can hire an artist to display a pleasing picture of a proposed new building.

Installing the Permanent Glass

It is not often that a church is financially able to install all of the stained glass required when the building is constructed. The church is fortunate if at the time of constructing the building it can secure the chancel window and one or two others to set the standard for the continued glass program. This plan permits those who enter the church membership after the building has been completed also to have an opportunity to share in its construction and enrichment.

A comprehensive, unified sequence of windows should be prepared in advance for the sanctuary and the chapel, describing the type of glass to be used and the general program of subjects to be depicted even if the church can only afford to install one or two windows in the beginning. The other openings may be filled with leaded cathedral (hammered) or other colored but "temporary" glass until additional permanent windows can be purchased. Even sections of a window may be filled in with temporary glass. Having this plan will be a safeguard against individual donations which might be out of harmony with the general scheme.

All the windows need not be equally expensive but all must be in harmony in character and design. The chancel window or the "west" window may be richer and more expensive than the nave windows, but

the complete program must be a harmonious unity. Each window must be designed separately in consideration of the natural or reflected light each receives and its location in the building.

Glass in the Church School

Clear glass is desirable in church school rooms. Medallions or "incidentallys" in color, or symbols outlined in metal, may be inserted. Great care should be taken to give a suitable churchly character to each room in the building. This object may effectively be assisted through skillful window design.

See Charles Connick's great book, *Adventures in Light, and Color* (Random House) for a list of American churches with excellent glass—and for a thrilling treatment of the subject.

2. SYMBOLISM

Realities in religious feeling and the apprehending of religious truth exceed the expressive power of words. Great spiritual truths are revealed differently to each person. The attempt to use words to express great ideals may simply handicap full meaning or create a misunderstanding for some persons. Symbols stand for ideas and yearnings which shall not pass away. Important symbols aid in recalling great events and truths that have inspired a saving faith. Symbolism is a universal language.

Now that we have authoritative literature on symbolism, let it be hoped that never again will furniture dealers and church decorators be permitted to "put over" symbols of pagan religions in Christian sanctuaries. This has been all too common in American churches. The church building itself is a symbol. *Poole's History of Ecclesiastical Architecture in England*, 1858, chapter IX, tells of ancient churches in which the various parts of the building—chancel, nave, narthex, etc., are considered as symbols.

Symbols should be used understandingly and constructively. They need not be limited to ancient forms, although ancient symbols should be as intelligible to modern Christians as forms of expression in literature and music. In the window of a country church in Illinois a sheaf of wheat and a loaf of bread are illustrated. In the First Unitarian Church, Chicago, the symbolism of modern life is worked into a beautiful harmony with universal symbols of Christianity in a building whose design closely follows the Gothic order. This is in keeping with a good theory of religious art, indicating that all of life is to be brought under the influence of religion. Thus this modern building follows in the train of the Gothic spirit.

Some Religious Symbols

Acorn—Latent greatness or strength.

Altar—Presence of our Lord. (Both symbolic and utilitarian.)

Anchor—Hope. Anchor and cross—Jesus Christ our Sure Anchor.

Candles—Jesus Christ; Light of the World; The Church in the World.

Chalice—Faith or worship; Sacrament of the Lord's Supper.

Circle—Eternity; Perfection; Completeness; Three circles interwoven—Unity of Triune God.

Cross—Symbol of the Crucifixion; Christ the Saviour of the World; Finished redemption. There are more than 100 forms of the cross.

Dove (Descending)—The Holy Spirit.

Easter Lily—Resurrection of Our Lord.

Evergreen—Immortality of the Soul.

Flame—Martyrdom; Inspiration; Youthful fervors; Purification.

Grapes—The Eucharist; Clusters on a vine: Our Lord and his followers.

Vine—Christ, the vine; his followers, the branches.

I H C Sacred monogram—Abbreviation of Greek, IHCOYC, meaning "Jesus," C taking the place of Σ. Sometimes written *I H S* representing the Greek I H Σ contraction of I H (ΣΟΥ) Σ (Jesus).

Church, parts of:

Nave—Church militant on earth. (From the Latin *navis*, a ship.)

Chancel—Part of church beyond front pew. Symbolizes the Church Triumphant.

The Arch—Triumph.

Spire—Heavenly aspiration.

Columns—Apostles; Saints.

Baptismal Font—Holy Baptism; Regeneration.

Baptistry—Entrance into the Christian fellowship and faith.

Lectern—The Word of God; The Gospel.

Litany desk—Penitence; Prayer.

Pulpit—Word of God; Instruction; Bearing Witness.

Sanctuary Lamp—The Real Presence of God.

Symbolic Colors

Black—Mourning and death; sometimes sin; evil and despair.

Blue—Truth; Faithfulness; Wisdom; Charity.

Green—Growth; Life; Hope.

Red—Love; Fervor; Holy zeal.

White—Light; Purity; Joy.

Vestments, liturgical:

Cassock—Symbolizing devotion.

Chasuble—Symbolizing Christian charity.

Stole—Symbolical of the yoke of Man's sin borne by our Lord; Willing servitude.

Surplice—Symbolizing innocence; Purity.

3. THE MINISTRY OF COLOR

God never intended the sanctuary for his worship to be drab, ugly, or depressing, or he would never have created the glory of the sunset, the

color of the sky, the land, and sea. Even the desert is rich in color. Color—animate, pliable—can do marvelous things. It can make a room appear larger or smaller, cooler or warmer. It can lower or raise ceilings, make a wall seem to recede or advance. Through the skillful use of color one can establish the mood of a room. Color can make a north room gay, as though flooded with sunshine. It can make a big bare room into a snug little haven, or make a room restful, studious, shy, frivolous, glamorous, breath-taking. Color has qualities which are measurable and understandable.

The use of color is a science. We all may appreciate music, but it takes a musician to create the music. So in the use of color, trained and skilled professional service is necessary to give us the effect we desire in any room to be used for divine worship, teaching, or fellowship in the House of God. Today there is such a wealth of color! Manufacturers have employed the resources of modern science to develop a limitless variety of hues.

Color Dynamics

Now we know that colors in hospitals and sanitariums are effectual aids in the cure of the sick in body or mind. Color can calm or excite, or create a harmonious, restful atmosphere required for complete recovery. Studies have shown which colors and patterns are bad in their effects on patients; which colors disturb or depress; which induce repose and improve a person's outlook. The monotonous white often found in hospitals is the ugly descendant of whitewash which was used when they were alms houses.

Decoration in a church is not just a task of an interior decorator. If an interior decorator is employed, he should have studied church architectural design, and know and feel the purposes and effects desired in the many rooms in the church building. He must work in close collaboration with the church architect who should approve the colors. The money spent for an architect and for an interior decorator will be saved in the end through the economies that these experts will be able to suggest.

Every tone to be beautiful must have its fitting companions, just as every musical note must have its fellow notes to form a harmony. Certain colors go in pairs, such as red and green, yellow and violet, orange and blue. Equal areas of pairs of colors are disagreeable. There must be only a small quantity of a complementary color against its opposite; as in music, there must be rhythm in the use of color. This means planning to use color in varying areas.

Almost daily, we receive inquiries from church committees and pastors, saying, "We are planning to redecorate our sanctuary and wish to have the work done immediately. What color do you suggest that we use on the walls and woodwork?" To this we answer, "Do not attempt any redecorating for at least a year and during that time, select trained, professional talent to examine the building, study the values and effects

of reflected and direct light, shadows, color in the windows and other elements that will affect the color results and values. Prescribe the colors and quality of material to be used, and specify in detail the steps in preparing the surfaces and applying the materials to be used in redecoration."

What seems to be the simplest problem of "painting up" may, if bungled, cause distress to many for a number of years and result in financial loss to the church. The people of the church must make sure that those who guide the work are thoroughly acquainted with all the problems involved. One reason why we cannot satisfactorily suggest colors at a distance from the building is the innumerable local factors that influence the results—the natural light received in the room, the dark corners, shadows to be avoided, where shadows are desired, the size and proportion of the room and direction of reflections.

The distance of color within a building from the eye is a most important factor. One building committee insisted on a certain color tone for a ceiling against the advice of a competent church architect. The architect saw this color sample as it would appear on a ceiling 40 feet above the eye and in keeping with the architectural character of the entire room. The committee did not take the architect's advice and, of course, after the building was finished everyone complained that the color of the ceiling was unsatisfactory. Employ an architect who is trained and experienced in the use of color and abide by his decisions.

The value of glossy surfaces, colors that will look clean (while light colors may be advised for dark rooms, they sometimes look muddy), and the necessity to combine and blend color tones are factors to be considered in selecting colors. The degree of light reflecting efficiency of different shades of color must be considered. Forest green, for example, reflects only eight to ten per cent while old ivory reflects seventy-two to seventy-six per cent of the light received. The finished work—the result of the skillful use of color on different kinds of surfaces and materials may be likened to the work of a leader of a symphonic orchestra.

Honesty and simplicity in decoration are desirable. Stenciled, curly, meaningless ornamentation should be avoided. Avoid too strong colors. Be careful of mottling "antiquing," stippling and other irreverent and garish effects, possible in the wealth of modern materials and methods. Avoid painting inscriptions, compelling us to read the same sentence every time we see it. Rather use a color tone that is restful and that leads us to prayer or praise, or a symbol that will allow us to frame our own individual message according to mood and need.

Good quality paints from a reliable company should be used by persons who are conscientious and skilled. Avoid an excess of thinners and driers used by unscrupulous craftsmen who do not properly consider the effects of weather and temperature which weaken the paint and cause uneven drying. It is better to pay the painter more per hour and let him work from nine o'clock to three. These and many other vital

factors will be properly controlled if the right professional talent is employed to direct the work.

A commission composed of churchmen, church architects, and color engineers is preparing a brochure on the use of color in religious work. Paint manufacturers provide helpful booklets.

While we cannot tell what colors to use on your church walls and we should not—perhaps we may point out certain important factors in addition to those already noted. All four walls of a room need not be painted alike. The end walls of a long room may be brought nearer by painting them a darker contrasting color. Badly proportioned rooms may thus be corrected.

Tinted calcimine is less expensive than oil paint but some brands cannot be washed and are less durable. Large painted areas should have more subdued colors than small areas. Do not be afraid of color. Be afraid only of the misuse of color. Like dynamite, color must be used with care and skill. There are light blues and greens, there are grays for rooms that receive a great deal of sunlight, and canary yellow and other yellows to cheer up the Sunday school room with northern exposure. Beware of too much white in any room. God did not use white so very much except on moving clouds and cold snow.

The Service of the Color Engineer

The services of an architect or color engineer will not only insure the selection of the best and most suitable materials but will secure the results desired through the effective use of color.

While we must always advise the employment of experts who are not interested in selling the materials of any certain manufacturer, it is true that reliable paint manufacturers render a valuable service to churches without actually obligating them to purchase their product. However, a church should accept such service only if it is convinced that the product of the company is suitable for its need.

We give below in brief form, the report prepared for redecorating an old church building.

Suggested Color Dynamics Painting of Church at _____.

COLOR "A" SOFT WHITE

COLOR "B" ROSE TAN TINT

COLOR "C" EYE REST GREEN TINT

(see accompanying Color Plaque)

Where Colors Should Be Used

"A" for main center ceiling and down to dark woodwork over side-beams. Narrow vertical surface surrounding upper tier of small windows also to be in "Soft White."

"B" for rear wall, side walls and sloping ceilings on both sides of church. This color also recommended for ceilings of front entries.

"C" for entire front of church including organ pipes; also walls of front entries.

NOTE: Woodwork throughout to remain unpainted.

Reasoning

Daylight illumination through all stained-glass windows, specifically side-windows, has faint greenish glow which will be offset by hearty ruddiness of selected new overall carpeting. This cheerful note will be accented by the predominance of Rose Tan Tint—light reflection factor of 57%. Soft White is not recommended for sloped ceilings because distracting shadows and "cutting" in would detract from overall unity.

Soft White for center ceiling and vertical area around upper windows will be adequate for maximum brightness and spaciousness. Color "C" for front wall and masonry recess of the single circular stained-glass window tends to prevent eye-wandering. The use of Eye Rest Green Tint as a focal wall color is one of the fundamental principles of functional color use. In this instance, restricted use of grayed-green serves to complement and cool down balance of your color scheme, including dark mahogany woodwork and stimulation of new rug and hearty Rose Tan tint of walls.

Directions for Painting

Repaired plaster should dry thoroughly before spot-priming with First Coater. First overall coat of paint should be mixture of first coater, adding to each gallon a quart of selected finish coat material and a quart of thinner. Finish coat to be in color as enumerated above, thinner to be added sparingly only if required for easy brushing.

* * *

Woodwork and Decoration

Wood has been maltreated in churches. Beautiful wood has been covered with ugly paint. In the treatment of wood have expert guidance. Know that sturdy, strong oak is not to be finely polished as satinwood or mahogany. Avoid glossy wood ceilings.

A Wealth of Materials

Not only is there a wealth of color but a great variety of materials that may be used to create the desired effect in a room. Textiles are among the most important materials for decoration. Find out what has been done and also about the materials that are available. Covering an old plaster wall with burlap may completely change the effect of the room.

Color in Floorings

Sometimes it seems that if a room is covered with a beautiful carpet no other decoration is needed. Drab, "lifeless" church carpets doubtless have been a severe handicap in religious work. Carpet will add color, warmth, and quietness to a room and improve the acoustics. There is an

increasing use of carpet since the advent of modern cleaning equipment. The many manufactured floorings available today make it possible to design rooms that are quiet and peacefully colorful. Old wooden floors may be sanded down and stained. The aisles of the sanctuary may be covered with carpet, composition tile or, in massive buildings, flagstone or tile is permissible.

Special Decoration

Any ornamentation used in a church should be in the form of symbolism, such as the use of the grapevine motif and others of ecclesiastical significance. There is such a wealth of subject matter available that it is unnecessary to have anything without significance, either in color or decoration in a church. Flowers and fruits have been conspicuous in Christian symbolism as well as a great variety of other forms.

4. Painting

Painting. At the present time, employing an artist for religious painting on canvas or walls involves an element of risk, but the Church must indicate its purpose to encourage and employ good art. Let paintings be placed for the present on side walls and in rooms other than the main sanctuary. There are many places throughout the church building suitable for good paintings. Avoid placing a painting in a position so that it must be viewed every time one attends a service of worship. The amount of money required for an acceptable painting if spent in glass or fabric is likely to be of greater value. The writer recently saw a brutal atrocity in the form of an oil painting set above the altar in a church. It was paid for by an old lady who wished to "encourage a young artist." It cost as much as a beautiful window. The "artist" should have been encouraged to paint barns.

5. Sculpture. In sculpture, the harmony of hand and thought may be expressed. Beauty of line and form, expressing thoughts too deep for verbal utterance, is caught and given permanence. Rodin's "Hand of God" puts in permanent form a dramatic expression of Creation, climaxing in "The Thinker." Excellent sculpture incarnates in permanent form human thought, emotion, character and heroic action.

Avoid the crude "stuff" that passes for modern "art" and sculpture today. In all ages there have been both good and bad, intelligible and unintelligible art, real artists and those who were merely addled.

Fabrics. The use of fabrics, which may be fireproofed and kept clean, will help avoid bare places and lend beauty and "life" to rooms; they are valuable to soften the lines of an otherwise "cold" or crude and "hard" room.

6. Chancel Woodwork. Wood is a glorious material and when reverently and skillfully used is of exceptional value in the church.

The architectural service besides supervision and approval of installation necessary for chancel and other woodwork is in three stages:

(1) The tentative drawings and these revised until a satisfactory scheme has been developed;

(2) The construction drawings and specifications sufficiently developed to enable manufacturers and craftsmen to state the cost.

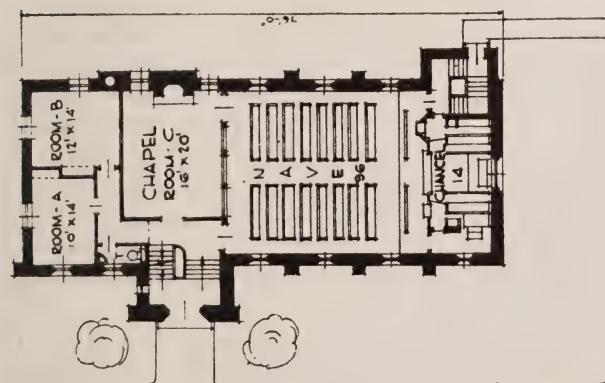
(3) The full size detailed and "shop" drawings necessary to execute the work. The cost of this section may be paid to the architect, or may be a part of the manufacturers' cost or may be divided.

The pastor of one large church thought that his committee were very wise because they eliminated the architect's fee for preparing the drawings for chancel woodwork. The cost of the drawings was included of course in the price charged by the manufacturer and since the work was taken out of the hands of the architect, competition for the work was eliminated.

Then when the committee found fault with the installation they were unable to secure a readjustment because of having removed the work from the responsibility of the architect who would have protected the church when the contract was written and the installation made.

7. *Mosaic*. It is quite interesting to note that the Greek word from which mosaic is derived means "belonging to the Muses." The decoration made by inlaying small pieces of colored stone, glass or other material offers endless opportunity for attractive enrichment of the church building. The patterns that may be designed are limitless in variety and scope. The wealth of mosaic in that other-worldly cathedral of St. Mark's in Venice (God preserve it!) made Ruskin say, "The whole edifice is to be regarded less as a temple wherein to pray than as itself a Book of Common Prayer, a vast illuminated missal, bound with alabaster instead of parchment." (*Stones of Venice* ii, 4, 46.)

Metal. Some of the most beautiful work in church art is in metal. Architects should be encouraged to use metal work when funds and competent craftsmen are available. Not only brass, bronze and iron but aluminum and other metals may be used for the embellishment and increased effectiveness of the House of God.



Several rooms, fireplace and chancel in compact plan.

XIII

THE CHURCH ORGAN; ELECTRONIC INSTRUMENTS; THE CHURCH BELL

Despite the much advertised substitutes, the organ is still the King of Instruments for church music.

Many believe that the matter of organ design may safely be left to the reputable builder. Most church committees are necessarily almost totally ignorant of the technical aspects of organ design and in some cases may be at the mercy of someone with prejudice or who vigorously rides a hobby or two. It seems that there should be a place for an organ architect or organ consultant uninterested in any manufacturing company who can assist the church in assembling the specifications for the organ needed in its particular situation, and then secure proffers from organ builders to build and install the organ specified. Such a consultant would have no financial or other interest in any certain organ builder. He would know that the purpose of an organ to accompany the singing in a church service of worship is different from the purpose of an organ used mainly for organ concert work. We are constantly on the lookout for such service. But at the moment, professional service of this type is quite limited.

Many organ builders claim that their products have certain individual characteristics so that they themselves must prepare the specifications for the organs they build.

The church would do well to investigate the organ builders and their reputation for sound workmanship, the success of various installations, and their financial rating.

One or more good builders may be invited to go over a situation and make recommendations to the church committee. It is the duty of the organ designer to plan an instrument designed to do a certain job in a certain place, keeping in mind all of the varying conditions to which it may be subjected. The designer must estimate the acoustical properties of the church, must work within various limitations imposed, must constantly recall the needs of the particular type of service or ritual, and then plan the total design of an instrument which will meet these purely individual and local conditions. It is easy to see that just buying any instrument is not the way to secure an instrument suited to do in any certain situation what an organ is supposed to do in that particular place.

The organ builder does not object to the location of the organ in a chamber providing it is high, wide and relatively shallow with sound reflecting wall surfaces and large tone openings. A chancel location, with

the organ on one side of the chancel only, speaking into the chancel through large tone openings, is a most satisfactory arrangement. Conditions frequently require a divided organ, although this is not usually best. A divided organ poses problems of temperature and tuning, as well as tonal blend, which are often left unsolved, hence the builder's usual preference for a unified location.

The organ should be located so that its tone will most advantageously blend with that of the voices of the choir. This further implies that the console and organist be located so as to get a balance perspective on the two tone sources. Only when this is possible can the organist secure anything like balanced blend. At the same time the console and organist should be so situated as to command a clear view of all that goes on in the church, from the start of the processional, if there be one, through all of the service to the end of the recessional. This suggests a side location, with the organist sitting so as to face across the chancel with an easy view to the rear of the church and to the altar. Some organists prefer to sit facing the nave so the console does not prevent their seeing across the chancel.

The generalities of layout just mentioned should be taken into account by the church architect when he prepares his first drawings. It is his responsibility to provide for ample organ space as stipulated by the church, that is readily accessible, and to provide ample tone openings so that the organ the church buys will render adequate tonal return on the investment. And he should provide for the efficient location of the console so that it may be useful in conducting the service. A clean, dry, airtight, soundproof room is a positive requirement for the organ blower. This should provide a solid foundation for the blower and motor, which should be accessible.

The architect has an opportunity to show his artistic ability in organ installations. The design of truly dignified and appropriate case work is a challenge to skill. A mere grille will suffice to cover the organ tone openings, but it can be very ugly and monotonous. The architect, however, is not responsible for deciding on the dimensions or even the location of the organ chamber.

The question of location and space for the organ in the case of church remodeling often presents a difficult problem. It is frequently possible, however, to secure adequate and even better space than formerly through wise planning.

The church organ, in a sense, is only as good as its acoustical environment permits it to be. It may have been well designed and properly placed, but if it encounters adverse acoustical conditions it can never be the instrument its planners intended. Acoustical correction should not be done at the sacrifice of all natural ring of music tones, since the building then becomes "dead" when filled with people and the effects of music are negated. Organ tone improves in space, with a proper degree of resonance.

What About Electronic Instruments?

When asked to consider electronic devices in the place of organs, one should ask whether it is truly an organ. Does it produce sound on the percussion principle or on the organ principle? Does it produce organ music or "organ-like" music? Does it ever have a cipher? Does it have a mechanical flavor, or quality of tone? Is its tone the best possible for church use? What servicing will it need? How will this be supplied?

Don't be misled by the claims of advertisers. Some manufacturers advertise instruments that have the "true cathedral tone." Such a statement is utterly meaningless. Some very old and broken down organs and poor organ music have been in cathedrals.

Before contracting to purchase an electronic instrument learn what a reputable organ builder will furnish for about the same price. It may be relatively easier to raise additional money if a real organ will thereby be made possible. Organ builders are producing portable organs which are found eminently satisfactory in smaller churches and chapels. Many prefer these to currently produced electronic instruments.

Perhaps the widespread use of electronic instruments instead of organs has occurred because churches were too often "over-sold" on pipe organs. When organ builders charged \$40,000 for organs for churches that had unsuitable and inadequate rooms for children's work, and in addition sold a stockade of dummy pipes, it was time for some kind of a rebellion. But pipe organs of excellent quality can be built by companies with a conscience for less than \$15,000, even in these times of high costs. It is far better to have an instrument of excellent quality to which more stops may be added later than a large instrument of inferior quality. A great big brass band may not be as enjoyable from the musical standpoint as a smaller but far better orchestra. And do not afflict the Sunday school with inferior instruments.

The Church Bell

The church, in a materialistic age, should not abandon a means of spiritual ministry which the community has expected and accepted through the ages. The church bell is an effective and dignified means of propagating the Truth. The use of the bell is a fascinating subject for one who loves to search out the thoughts and feelings of Christian people of all lands. Walter's book, *The Church Bells of England* (Oxford, 1912), contains a bibliography of two hundred and fifty items.

Bells

The bells contributed much to the church life of England. Cock's book, *The Church Bells of Buckinghamshire* is a volume of 750 pages describing the bells, with their inscriptions of a single county. The inscriptions are interesting and often odd. One reads:

"I call the living, mourn the dead,
I tell when days and years are fled;
For grief and joy, for prayer and praise
To heaven my tuneful voice I raise."

While American churches for a long time lacked some helps to churchmanship that were left on the other side of the sea, we may be thankful that so many church bells rang in town and village. The writer considers one century old bell in a New Jersey village to have the sweetest tone of any in the land, or is it because in his boyhood the church bell, sweet and insistent, ringing across hill and dale brought to him, more than any other material thing the message of something beyond the earthly.

Fine sets of chimes and carillons have been installed in American churches, and thousands are blessed by the music of bells. Let every church have something to give bell music.

Amplifying systems for the music of bells and chimes are becoming increasingly acceptable and will continue to be improved. There are now available systems that have miniature bell-like equipment which is unaffected by climatic conditions. This is amplified electronically and apparently is highly satisfactory. This equipment eliminates the need to construct expensive towers to support the weight of bells. But avoid cheap, untested, assembled systems. Here again have the architect bring the very best information on the subject suited to the individual situation.

Have the architect examine contracts and guarantees as well as the equipment. Before purchasing equipment make sure that the installation and future servicing will be cared for by thoroughly responsible and competent persons. Learn whether the seller simply assembles the equipment and sells it or whether he *manufactures, installs, guarantees and maintains* it through the years. The installation of electronic or any type of electric equipment for churches should be done by skilled mechanics thoroughly familiar with the equipment and the effects desired by *the church*.

Churches should be very careful not to annoy the community with any unpleasant sounds or effects. It is quite possible that built up communities will protect themselves against raucous, annoying sounds. Many churches are very ill-mannered in this respect.



Experience and training in Worship at Gethsemane Episcopal Church, Minneapolis, Minn.

XIV

MECHANICAL EQUIPMENT AND BUILDING MATERIALS

1. HEATING THE CHURCH

The heating equipment of a church should receive very expert attention by the architect and heating engineer. The several areas in the church plant have different uses and the times of use differ widely so the heating system of churches must have unusual flexibility. The relatively limited use of some sections of the building means that rapid heating is an essential requirement. Then too, many churches do not have adequate janitor service although the employment of good, full-time janitors who can rate as skilled mechanics is increasing. Automatic controls for each section and more important rooms should be provided in the church heating system. The automatic controls make for operating economy.

Either a member of the architect's staff or one employed by him for the purpose must be a thoroughly competent heating and ventilating engineer who realizes that the heating needs of a church are different from those of any other building. This work of the trained and experienced engineer must not be given to a heating contractor or salesman.

All of the old difficulties about having adequate church heating can be avoided in planning new church buildings or improvements. Take, for example, the common complaint that the choir or chancel space is not comfortable. The chancel structure may be compact and very badly ventilated so that the air is dormant and the choir may consist of a rather large group of people. A competent heating and ventilating engineer, working in co-operation with the architect, may install a unit for recirculating the air in the space below the chancel, fitting it with a discharge duct and inlet grilles for fresh air so that this space can be made comfortable. But no amateur or heating contractor can be expected to solve a problem of this kind. Changes of air will counteract the tendency of heat pockets forming or overheating of certain areas and underheating of others.

The building committee can, of course, stipulate the heating and ventilating requirements and results wanted in all parts of the building. Then they must place the whole matter in the hands of the architect who, with his heating engineer or the engineer of his selection, will prepare the proper plans and specifications.

Any heating system must be designed for each individual problem with consideration of climate, humidity, heat loss, available fuel, usage of each room in the building, etc., etc.

Hot water heating is not suitable for most churches, especially

those of an area of 5,000 square feet or more. Church buildings are not occupied or managed like other buildings, and freeze-ups occur more frequently. With a sudden interruption of the source of heat of a hot water system in cold weather water often can not be drained rapidly enough to prevent its freezing in the pipes. This would be worse in a radiant system because the piping laid in concrete often has not adequate pitch for quick draining. Hot water systems are too sluggish both in increasing and decreasing temperatures to meet the needs of churches.

What About Radiant Heating?

By "radiant" heat is meant a system in which pipe is imbedded in a concrete slab through which steam or hot water is run.

Some architects state that they think radiant heating and panel heating ought to be carefully and perhaps favorably considered in certain situations.

Manufacturers of pipe and others make enthusiastic claims for alleged advantages in this system of heating. We feel, however, we should lean strongly to the side of conservatism, rather than recommend any equipment before it has been thoroughly tested in use in churches. The involved and complex problem of church heating has been solved with complete satisfaction through the use of other modern systems.

Doubtless there will be many new methods of heating. One system heats from the baseboard. A system of drawing heat from the earth is in use for homes. This system extracts heat from the earth in a sort of reverse of refrigeration.

Before adopting a radiant heating system the church should make sure that the fullest possible investigation of such a method, where used in church buildings of similar size and in the same climatic conditions, has been made by an architect or heating engineer entirely unbiased, not easily sold to "every new thing" and not interested in or employed by any manufacturer or dealer.

We suggest that in each local situation at least all of the questions found below should be raised by the church and satisfactory assurances given before the system is adopted:

1. Does the concrete fill required for radiant heating mean an extra dead load to be carried by the structure, thereby adding to the construction cost?
2. Compare cost of installation, including any additional required construction or labor costs with cost of installing other systems that may be designed for this church.
3. If hot water is to be used, how in this climate will freezing be avoided? How will the system be drained?
4. Is there any possibility of trouble in the system due to difference in the rate of expansion and contraction of the pipes and that of the concrete in which the pipes are imbedded?

5. If steam is used, will it be too hot for foot comfort? Will it be uncomfortable for children sitting on the floor?
6. How long will it take to heat the main sanctuary and each of the other rooms?
7. Will supplemental heating equipment be required in this climate to counteract down drafts at windows or drafts at other places in your building? In church school rooms with large window areas, how will the system compensate the loss of heat? Will it be necessary to use double glazing or storm sash? Will it be necessary to have a separate system of piping for each room? How will the temperature be controlled or heat shut off in each individual room as required for its use when other rooms do not need to be heated?
8. Is the installation protected from contact with cinders or other sulphur bearing materials which may affect ferrous or non-ferrous materials? Will all piping be protected from materials containing acids?
9. What about external corrosion or rust of the pipes because of action of chemicals in the concrete or plaster?
10. What about the danger of corrosion within the piping to be used, with the water that will be used *in this community*?
11. Is there any possibility or danger of failure at the joints of fittings and couplings?
12. Is there any danger to be avoided in connection with bending the pipes?
13. If leaks in the system occur, how will they be located?
14. Exactly what are the possibilities of ever having to take out the pews and tear up the flooring and concrete floor to repair leaks or failures in the system?
15. What prevents the heat from going downward and outward as well as upward from the pipes and the concrete in which they are embedded?
16. What is the difference in temperature in the boiler and in the pipes? How does this loss compare in a system with radiators?
17. What treatment must be given the concrete fill to prevent deterioration of the concrete?
18. What kinds of finish floorings have been used in churches without damage or deterioration and for how many years?
19. Will the flooring that can be used add to the cost of construction?
20. Will the flooring manufacturer guarantee the durability of the flooring when the product is used over radiant heating equipment in this church?
21. What considerations must be observed if mastic is used in the flooring?
22. Will it be necessary to have any humidifying treatment of the air, for health reasons, to prevent excess drying of furniture, etc.?

Air Conditioning and Ventilating the Church

No longer will churches that as a matter of course have heat supplied in winter, cheerfully continue to endure the discomfort of too much heat or too high a degree of humidity in the summer. Comfort and well-being depend upon the relative amount of moisture in the air, the rapidity of air motion across the body and the cleanliness or quality of the air, and the right temperature. It has been found that people produce a greater amount of work in air conditioned rooms which receive a supply of fresh air from out of doors, cleaned completely from dirt and smoke, cooled or warmed as may be required with increased or reduced humidity.

To completely air condition a church plant where rooms are used at different times requires careful study of each individual building and all parts of the building in different climatic conditions and in buildings of different methods and materials of construction. Great progress is being made in improving air conditioning equipment of many types. It is not the purpose of this book to take the place of the architect and engineers, nor is it the place of the building committee or pastor to do the work of expert technicians. All churches planning to build or remodel in areas where summer heat is uncomfortable should have a report made by the architect on possible air conditioning or air cooling equipment of different types and the cost of installation. In planning new buildings, provision should certainly be made for future installation if it is not possible to install the complete equipment during the construction of the building. Some churches have already announced that the cost of installing air conditioning equipment in existing buildings will be paid for within a very few years through the increased income received through the summer weeks. In any case an adequate ventilating system should be provided to insure a supply of fresh air at all times in all parts of the building. Don't just depend on a favorable wind to blow it in at the right time and place.

2. LIGHTING THE CHURCH

There are no traditions of church lighting which have stood the test of time. While architects and craftsmen have, through the ages, designed and made beautiful glass windows, decorations, etc., they could not use electricity and therefore the church builder stands in a new, rather untried field, when it comes to designing church lighting. Here again it should be sufficient to say that the leader of the enterprise and the church building committee must simply insist that the architect have on his staff or available, a competent lighting engineer, one who is not concerned with selling products, equipment, or power. Some churches have turned to the power company for advice on church lighting with unsatisfactory results.

However, a sub-committee on lighting could do a great deal of study, confer with the architect and lighting engineer and try to understand

this important matter. Then when suggestions and recommendations are made by the architect, this committee can provide constructive criticism and recommendations to the congregation.

There must be sufficient light without destroying any of the desired "atmosphere" of the room designed for worship. Too bright a light may destroy the total effectiveness of the room. Bright light has an effect on the colored windows, and of course, an inadequate amount of light hampers the work of the church.

There have been many fads of church lighting, such as indirect lights, which often highlight an ugly ceiling that ought to be hidden or at least forgotten. Then it was hoped that a part of the light thrown to the ceiling would be reflected down to the pages of the hymn book. Of course, this was a totally wrong system and required much more electric current. An electric power company admitted when questioned by a church building consultant that the indirect lighting fixtures, even when no film of dust on the ceiling absorbed much of the light, required three times as much current to light the church as direct lighting fixtures.

The lantern type of fixture properly arranged, especially when hung from chains, adds to the architectural effectiveness of the room and results in efficient lighting. But the lanterns must be carefully designed not only to fit the architectural character of the room, but to avoid glare when looking directly at the fixtures. Where there is a center aisle and two banks of pews, a row of lanterns may be hung above each of the rows of pews, the floor areas being properly divided and a certain area served by each lantern with candle power as specified by the architect. Have the architect design the lanterns, of course. We have all seen horribly large lanterns installed in churches whose size should have indicated lanterns half the size. Supplementary light in addition to the lanterns may be required for specific areas.

There should be separate control for each type of light and for each of the areas such as pews, choir, pulpit, altar, etc. Lighting also does much to accentuate the architectural features. The pulpit and lectern should be adequately lighted without special lighting fixtures attached to these important pieces of furniture. Avoid lights placed around the chancel arch or in the chancel ceiling so as to distract attention.

Lamps suspended in the chancel in view of the congregation should have shields. These fixtures can be made ornamental and add considerably to the architectural effect of the church.

Do not be too eager to conceal the main sources of light. Well designed lanterns in the nave help to indicate the scale and extent of the church. Flood lighting of the interior may eliminate all shadows and destroy their value in giving expression to the form and proportions of interiors and their contents.

The Management of Lighting

Dr. Fred Eastman has written most helpfully about the use of light in the church: "Light and music are both essential for developing the

proper mood; they should work in harmony and not against each other."

Worship services are aided by carefully planned dramatic effects. In this, lighting plays an important part. At the beginning of the service the auditorium or nave should be dimly lighted and the chancel and altar emphasized; when the hymns are sung the auditorium should be fully lighted, then dimmed during the prayer, the anthem and the sermon. The light upon the choir should be brought up when it sings and dimmed afterward. The light upon the lectern and pulpit should be intensified when the minister is reading or addressing the congregation.

Chancel lights may be from concealed sources and flood the choir and the altar with a bright, but not a harsh, illumination. Many, however, prefer visible lamps to light the choir.

The pulpit light should come from a small spotlight located in the arches or ceiling twenty to thirty feet above and in front of the minister, and shining down upon his face at an angle of about forty-five degrees. It should be equipped with concentration rings so as to prevent a spill of the light to right or left.

Good lighting not only contributes to efficiency and eyesight conservation, but it also helps to provide an environment in which one can live healthfully and happily. In the church school rooms good lighting helps to create the surroundings that affect the moods of children. A pleasant, cheerful, comfortable atmosphere helps to develop the right psychological attitudes and light and color are important in doing this.

Light must be evenly distributed over the entire room used for school work. The color of the woodwork and the paint on the walls and ceilings affect the lighting because the amount of light absorbed by different colors and surfaces varies. Germicidal lighting units are now installed which are said to reduce bacteria within the room.

Lighting the Fellowship Hall and Stage

Well designed lighting for the fellowship hall and stage is essential to the successful usefulness. Here the lighting should be designed not for worship services but for educational and dramatic use. There should be adjustable lights in front of and behind the stage curtain, a simple assembly of stage lights—borders, floods, strips, spots, and bunch lights. (See "Drama in the Church" by Eastman and Wilson, pages 152-4.) Footlights are not desirable. This nuisance feature in stage construction is now eliminated.

Have lights flush in the ceiling if the room is to be used for recreation. The house and stage lights should be controlled from one switchboard so located on the stage that the operator can see the action. Switches should be noiseless. There should be rheostats on the main circuits, including the house lights and local rheostats on the floor lights.

Mechanical devices are now available for providing almost any desired lighting effect. More than a hundred different types of electric bulbs may be had, ranging from three to a thousand watts in capacity,

and in various shapes and colors. There are standard control units for spreading and for concentrating light beams.

Dimmers are recommended to provide flexibility in each of the circuits and should be so planned that an even illumination is obtained at one-third or one-fifth the normal intensity at times when the subdued lighting is desired. The dimmer method of control brings about a gradual and unnoticeable change in the lighting intensity.

Don't have many lights on any one circuit, and use noiseless switches throughout the building.

Floodlighting the Exterior

The entrance of the church or the front façade may be flood-lighted to make it attractive and to compel attention to the church. Flood-lighting, or spot lighting may also be used effectively on towers and spires when they are of outstanding beauty or interest.

General Suggestions

In lighting as in everything else, new things are always being promoted. We had "indirect" lighting which was illogical, inefficient and expensive. Then there is cove lighting, the source of light being in a trough around the edge of the ceiling. The trough was an awful dirt catcher and any film of dust on the ceiling would absorb much of the light. Then fluorescent lighting became the sudden fad, with its often distracting flicker and unsubtle effect. No system should be used in a church sanctuary or social hall that cannot be operated on dimmer equipment.

Let the church avoid the cost of experimentation and use improved equipment and methods only after they have been thoroughly tested *for church use*. With present day equipment we can have perfect church lighting.

Nothing in or about the House of God should appear to be lacking in dignity, beauty and durability. In the very important matter of lighting, as in other departments of architecture, the pastor, building consultant and committee must be able to stipulate the *results* desired. They need not try to become technicians.

3. HARDWARE AND FIXTURES

Much of the charm of old world churches is due to the sturdy and well designed hand-made hardware. A door lock was made to keep a door fastened; a hinge to hold it in position. Both showed evidence of design and craftsmanship adequate for their intended purpose.

Doubtless we shall see an increasing use of metal work in churches which will provide an attractive field for craftsmen and a source of satisfaction to churchmen.

All plumbing fixtures and hardware must be of the best quality. A few extra dollars spent for a better quality of hardware and plumbing fixtures is economy in a church building program. It is disappointing

to find door knobs loose in a church less than a year old. All designs and specifications for hardware and fixtures should be prepared or selected by the architect, and nothing should be used without his approval.

4. MECHANICAL CONVENiences AND GADGETS

A sub-committee on furnishings and equipment may have a very interesting time investigating the various mechanical fixtures and other equipment that might be adaptable for church use. We list a few items purely by way of suggestion. Of course the committee must make sure that the usefulness of anything suggested will repay its cost. Sometimes people go to the expense of placing an electric eye in a kitchen door which may not be used more than once a week and omit other items of greater importance. And yet this or other conveniences may be a valuable investment for the church plant. But let's not be overly enthusiastic to place everything that may be suggested in the plans for the church. Committee members may persuade the church to invest in items of lesser importance at the expense of good color schemes for all the rooms or of quality construction throughout the building. A few years ago "access" cupboards were placed in the walls of church school rooms, so the secretary would not need to interrupt the class in order to collect the statistics and money. These added \$25 each or more to the cost of the building. Then it was found that snapping the door open and shut was more disturbing than to have the person enter the room. Through better management of the school this distracting practice was wholly eliminated anyway.

Items That Might Be Considered

1. Additional lavatories.
2. All necessary provision for installation of television and radio.
3. Ash lifts, if coal fuel is to be used.
4. Ceiling ventilators above kitchen ranges.
5. Continuous hot water supply.
6. Drinking fountains.
7. Dumbwaiter to lift supplies to another floor from the kitchen.
8. Fireproof storage space for cleaning fluids, etc.
9. Fireproof vault, but not in a basement or where dampness might cause destruction of papers.
10. Fire protection equipment.
11. Foot control faucets for wash bowls and drinking fountains.
12. Hat and coat checking rooms and equipment.
13. Heat controls or regulators.
14. Out door electric outlets and light fixtures.
15. Sliding panels instead of doors in crowded places.
16. *Storage walls* that are fabricated with a great variety of arrangement take the place of walls. Book shelves, closets and other built-in facilities included. They can be moved to change the sizes of rooms.

17. Suitable and well located storage space for everything movable.
18. Telephone booth.
19. Vacuum cleaning equipment and piping for same. Janitor's closet and water supply on each floor. Janitor's workshop.
20. Window screens.
21. Window shades throughout.
22. Wood preservatives wherever needed.
23. Door closers. Panic exit devices.

5. BUILDING MATERIALS

While great progress has been made in recent years in manufacturing new building materials, it is not necessary to delay planning in the hope that marvelous new products will soon be developed. The church should use durable, tested materials and should not experiment with new materials, methods of construction or equipment until they have been tried out in other construction and fully tested for church use. The church cannot afford the expense and possible loss due to experimentation. We shall let others do the testing and experimenting. We know what can be done with stone, brick, wood, concrete and steel and do not need to delay needed building projects for new materials.

There is always the possibility of overdoing a new thing. For example, in one public school room the walls were made of glass blocks, with no transparent glass windows. Although the room received a great deal of light, it was difficult to control the volume of light. The children could not even glance out of the windows, and this unnatural situation resulted in nervousness and conduct problems. These difficulties might have been anticipated if children's workers were consulted when the plans for the building were prepared.

The development of glass as a structural and decorative material has greatly increased during recent years and, of course, there are places where structural glass may well be used in a church or church school building.

Many types of building tile are helpful in church work. In a recreational hall, for example, tile may be used for surfacing the walls so that a beautiful color effect, good acoustics and durability are secured.

There are insulation materials that obviate the use of plaster. New materials make it utterly inexcusable to have bad acoustics in any room. Manufactured roofing materials that are durable, fireproof and colorful are readily available. There are satisfactory flooring materials in great variety.

Aluminum roofing is now available. Many good qualities are claimed for stainless steel—that it is unaffected by exposure to weather; will neither rust nor peel; is strong, won't stain adjoining surfaces, requires no protecting coatings—such are the claims of manufacturers.

What Does the Leader, Pastor, Consultant or Committee Need to Know About Materials?

The architect is employed to advise regarding all building materials, methods of construction and equipment. Pastors and others on church boards should be prepared to adopt the specifications of the architect whom they have employed, having assured themselves in advance respecting the competence of himself and his staff.

However it is quite natural for those concerned with a church building project to interest themselves in many items that belong to the architect's responsibility. Then too an intelligent interest on the part of committee members in important items may prove to be helpful in supporting the architect's recommendations.

Those who wish to inform themselves regarding the use of building materials will find such a book as *Materials and Methods of Architectural Construction* by Gay and Parker (N. Y., Wiley & Sons, 1947, 5th printing) immensely helpful and interesting. However, let's remember it takes many years of highly specialized technical training to equip one to be an architect and an amateur may do a lot more harm than good in any of the professional services.

One can feel quite embarrassed for example to urge upon a committee the use of a metal in certain situations and learn that the architect has contrary advice and proceeds quite beyond the amateur's depth with warning discourse on such things as electrolysis, oxidation, efflorescence, expansion, contraction, eccentric loads, deflection and more, to the effect that we had better allow the architect to perform that service for which he is trained and paid.

It is quite proper to ask the architect for an opinion regarding enthusiastically advertised materials and equipment, even though one would hesitate to suggest that his physician use upon him some kind of newly advertised medicine.

Building Materials and Exterior Design

The materials of construction are important to the exterior design. Avoid synthetic substitutes which will cheapen the effect of the building. How disappointing it is to find that what at a distance appeared to be a brick church is only a shell of brick over wood. Concrete blocks should not be made to imitate stone. Materials for building walls economically of solid, fireproof masonry are available in most sections of the country. Meaningless details such as spotting stones (set on edge) about in a brick wall do not improve the appearance of a building.

A carefully designed brick wall is beautiful, appropriate, and durable. Many people think that a light-colored or buff brick wall appears to be less permanent in effect than brick of darker color, soils more quickly and effects of weathering are less pleasing.

Stone, of course, seems most suitable for the church. It seems to express strength, and durability. But whatever the material chosen, get the best that can be paid for and use it in honest fashion.

XV

THE CHURCH AS A SCHOOL

The Whole Congregation a School

The early followers of Jesus were called disciples. That means they were learners of Him. Education has been a notable feature in the whole Christian movement. We now conceive of all the educational work of the local church, not as a Sunday school, an organization seemingly separated from the main work of the church, but as the entire membership of the local church being engaged in teaching and learning processes. The church school does not have an aim separate from the aim of the Church. In these processes various methods are used and different group formations are assembled for the several activities and different methods of learning. The entire church plant therefore is considered as a unified building, rather than a group of separate buildings.

Plan the Program Before Planning the Building

The very first stage toward a satisfactory building program for the educational work of the local church is to secure the best possible counsel to aid in developing an educational program suited to the local situation. This may mean a program quite different from that required in another church and perhaps very different from the educational program which has been conducted.

Flexibility and Changes in Program Must Be Provided For

The educational work of local Protestant churches has been tragically handicapped by inadequate and unsuitable equipment. Many churches ought not to attempt to prepare plans for their church school work until the educational program and leadership have been developed sufficiently to justify a new building. This may mean a period of intensive work over a period of two or three years. Much of this program, of course, would still be on paper until the new building is provided but the church must know for what kind of educational work the plans are to be drawn and train leadership to make the most advantageous use of the building as soon as it is completed.

Most churches preparing to build would do well to make a thorough examination of the effectiveness of the work as at present conducted. The International Council of Religious Education, 203 N. Wabash Avenue, Chicago 1, Illinois, will send a list of important literature on this subject. Conferences with denominational leadership and responsible regional church school directors and workers will bring effective help for the satisfactory solution of local problems. However, do not

expect educators to agree always on building and equipment needs. Education deals with changing conditions and growing life and unanimity of thought would mean stagnation.

When one church began to analyze its program, it was found that it lacked any clearly defined statement of goals, or any definite plan for measuring its progress as a Christian working force. After six weeks of study, the group listed ten definite goals toward which the work of the church would be directed; they then listed ways and means of attaining these goals. As a result, the effectiveness of their program was increased appreciably, and the leadership was then in a position to state what rooms and equipment were necessary. The entire congregation was led to realize why additional building and improvements in equipment were required, and then with enthusiasm provided the funds for the building program. They were convinced that adequate and suitable rooms and equipment are effective aids in achieving the purpose of the church.

The active church is, and must always be, an educational institution. Every church school building project is a separate problem in itself. Its program must be built up from the ground, and with a knowledge of the goals of the particular church. One must not expect to turn to a book of diagrams or list of standards to find the answers for any given building problem. The best a book can do is to try to point out the



Supply Cabinet—Rubber Tile Flooring. As a part of their training these girls are helping to select materials for use in the next session of their group.

areas of study to be pursued and the program to be assembled by the church and its consultants before asking an architect to discuss building plans.

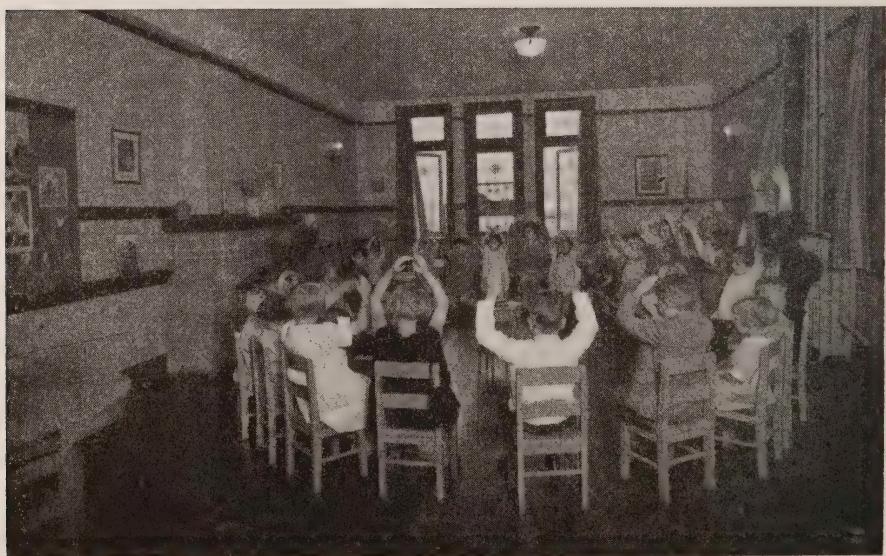
Trends to Be Noted by the Church School Builder

The entire congregation should achieve a speaking knowledge of modern Christian education. They should be aware of some of the definite trends in Christian education that have gone beyond the experimental stage and the activities and methods of church school work that have developed. All these trends and corresponding activities will help determine the kind of building to be designed and the equipment to be selected.

For What Purposes Are Rooms Needed?

In the work of the local church school several different types and sizes of rooms are required. Rooms are needed for assembly where groups learn to worship together or are occupied in some group activity. This may include dramatization, planning future projects, listening to a story, seeing pictures and sound film and soon doubtless television will be a valuable aid in educational work.

Some church schools are organized into departments where two or three age groups may be gathered for one assembly. In larger schools there may be only one grade in an assembly group or department, each grade being conducted as a separate unit. This latter method increasingly is advised in schools that have as many as twenty pupils in a grade.



A room in First Methodist Church Oak Park, Ill., showing that a liberal area of floor space is needed for childrens' rooms.

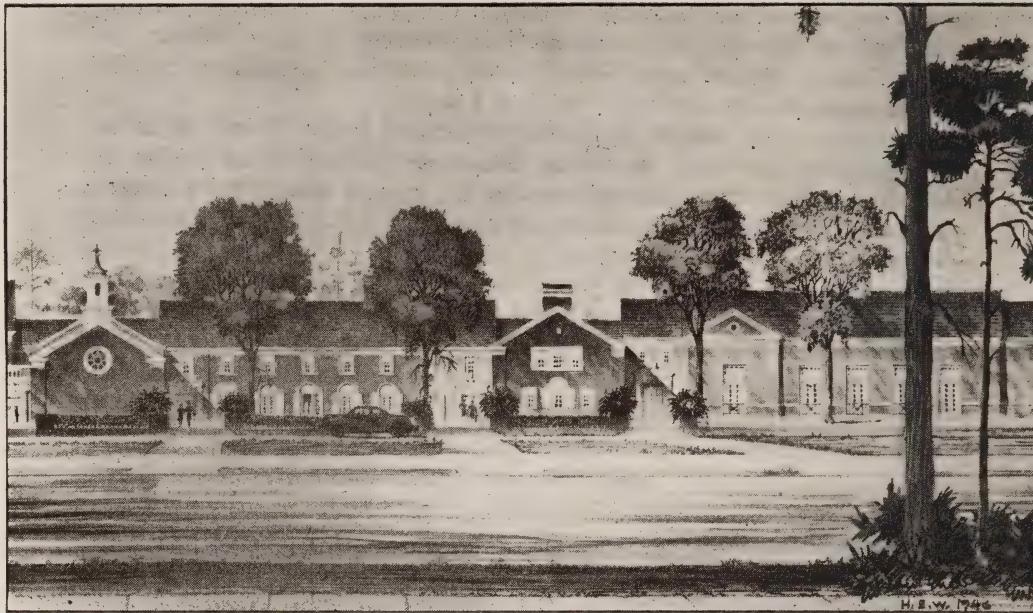
Rooms are needed for study and research; this means rooms that will be quiet. Before planning these rooms it is necessary to know about the groups that are to be assembled together and their possible sizes and ages for work in departmental or class groups.

A separate room should be provided for the work of each class or other group which meets under the direction of a teacher or leader. If this is impossible, some plan of rotating the groups should be adopted.

The library and places to store maps and other equipment must not be overlooked.

The following schedule of group organizations and floor space requirements has been assembled for certain schools. This list may not be suited in all items to the requirements of any other school. This program may be taken as a statement of minimum requirements in some schools. Many workers will ask for larger floor areas, per person, than are indicated below:

<i>Groups</i>	<i>Ages for Each Dept.</i>	<i>Floor Space Recommended per Pupil in Attendance</i>
1. Nursery	to 18 months	20-30 square feet
2. Toddlers	18 mos. to $2\frac{1}{2}$ or 3 years	20-30 square feet
3. Nursery Class	$2\frac{1}{2}$ or 3 years	20-30 square feet
4. Kindergarten	4 and 5 years	20-25 square feet
(not more than 15 to 20 children of above groups in one room)		
5. Primary	6, 7, 8 years	Work rooms for interest groups or classes, one of which will be large enough to seat all the children, 8-9 square feet for each, or children's chapel. Class and work rooms 10-15 sq. ft. for each attendant.
6. Junior	9, 10, 11 years	8-9 square feet in assembly room or chapel. Class room 10-15 square feet.
7. Intermediate or Junior High	12, 13, 14 years	8 square feet in assembly room or chapel. Class rooms 10-12 square feet.
8. Senior	15, 16, 17 years	7-8 square feet in assembly room; 9-10 square feet in class rooms.
9. Young People	18-23 years	Same as for Seniors.
10. Adult Division	24 and above	7-10 square feet for class room. Monthly assembly where desired in the church or Fellowship Hall.

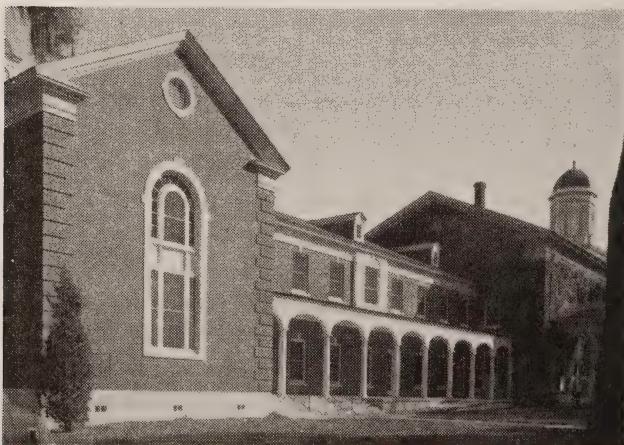


(Nave not in picture), Chapel, Educational Unit, Administration, Fellowship and Recreation.

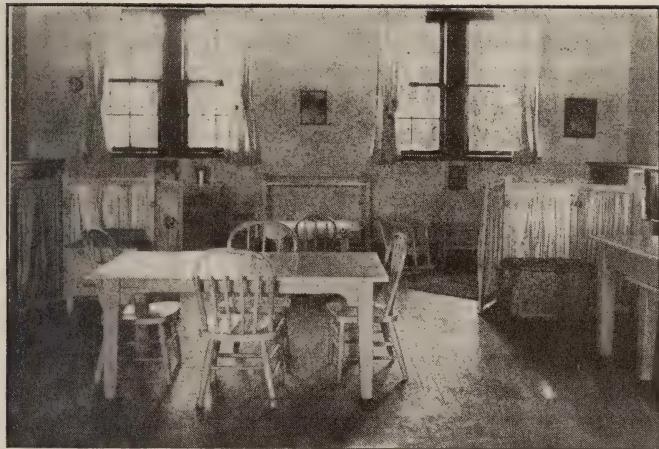
Architect's first sketch for chapel, church school, administration and recreational units of a new plant for Highland Presbyterian Church, Fayetteville, N. C. Thomas and Wagoner, Architects.

Many churches need to erect such units as additions to existing buildings. Note excellent fellowship hall at the right with high ceiling and at main floor level.

Winter Park, Florida, Congregational Church Parish House addition



Scotford Photo
Jas. Gamble Rogers II, Architect
E. M. Conover, Consultant



Some day, the ideal
children's room
will be built.

Faults may be found in these rooms, but at least studied attempts were made to provide suitable for teachers and pupils (Never use chairs with straight spindle backs. The author is constantly seeking photographs of commendable rooms in church buildings.



Committees Should See for Themselves How Much Space Is Required

To do this, arrange equipment as it is desired to use it and then measure the floor space to demonstrate the areas needed rather than to turn to a schedule in a book. Space may be marked out on the floor of a hall borrowed for the purpose and the arrangement of equipment with pupils present marked out on the floor and the occupied space measured.

Multiple Use of Chapels

As noted in Chapter X some church leaders suggest that a children's chapel may be used for certain types of assembly meetings for both the primary and junior departments, one of these groups using the children's

chapel at the beginning of the church school period, and then going to their class rooms where they remain until the end of the session. Then the other department may assemble in the same chapel having occupied their class rooms during the major part of the church school period. It is not practicable to duplicate the use of class rooms during the same session. A "committee" may arrange the room for each assembly as a part of their training. The church chapel, where available, may be used for certain types of assembly meetings by the intermediate, senior, or other departments.

Provide for All Needed Equipment

After the rooms required for the work of each departmental or class group have been listed, a committee on the church school work should carefully scrutinize this list of requirements and make sure that lavatories, coat rooms, storage closets, built-in book shelves, cabinets, "storage walls" and all such features are included and so designated that the architect will know where, in relation to other rooms in the church building, these facilities are to be located. We are making this chapter quite brief in view of the material set forth in Chapter XXII on The Building Program.

Certain Trends in Religious Education Which Planning Committees Should Study

1. The Church and Church School Have a Single Purpose.

This very definite conception has been noticed.

2. Worship and Training in Worship.

There is a greater emphasis on well planned formal worship and also on development of informal and spontaneous worship experiences in connection with learning and the fellowship services. The leader will plan, possibly with a group, the time, place and procedure for worship.

3. Pupil Activities of Learning.

An emphasis on pupil activity will not minimize the need for intensive study and more effective teaching. Failure to get pupils to do homework for the church school has turned attention to the need for supervised activities of research, committee work and study in the school. The increasing length of the church school period is making it possible to devote a part of the time to this purpose. Investigation of problems under discussion will take pupils to the sources where information may be found. This creates a need for a church library, for equipment in the classroom where source material may be kept, and for facilities which will provide an atmosphere conducive to study.

4. The Church School Is a Fellowship.

In the church school many approaches are used. At various times groups are engaged in study of the Bible, biographies, hymns, and other religious literature. Some groups learn through dramatization of Christian principles.

Because the Christian serves God through service to his fellowman,

missionary projects and social service activities are developed in church school classes.

Recreational groups enable teachers to get to know their pupils better, and bring out the personal needs of individual members of the school. The church is neglectful of its responsibilities if it depends on other agencies to supply social and recreational programs for its members because the church needs to use this means for character development.

These different groups need different kinds of rooms and equipment. Equipment for dramatics, a workshop for construction projects, a dark room for the camera club, a library for leadership education—these and other variations from the former usual provision for church school classes help to make the educational program of the church more effective.

5. Larger Classes.

There is a noticeable trend toward larger class groups within an age range. This plan is favored by many because of the necessity of having well trained teachers in the church. This means fewer teachers to be enlisted and trained. Assistant teachers who need to be well trained help in the visitation and work in the class. Each class must have a room with walls of solid construction.

6. Boys and Girls Grouped Together.

More normal work is possible when boys and girls are grouped together in classes. They are accustomed to being together in the public school, in the home and in other groups. It has now been widely demonstrated that boys and girls may be in the same class group in the church school. In smaller schools it is far better to have a class group for each grade than to have pupils of two school grades grouped in one class in church school. Of course, now and then it will be desirable to have a group of boys and one of girls to work separately on some project or interest.

7. Modern Church School Rooms Are Used More Hours per Week.

In building committee and congregational meetings objections formerly were raised to "spending so much money for rooms that are used for only one hour a week." Even so, it was perhaps the most important hour in the lives of many persons. The modern program makes much greater use of the building than when just a Sunday school was held. One primary department room in an active church is in use one hundred and eighty-five hours during the year. In a number of churches, the Sunday session of the church school has been expanded to occupy two or more hours. This has been done particularly in the departments of the younger children, up to and including the junior department. Sometimes the intermediate department is included in the expanded session.

8. Weekday Schools in Churches.

The *weekday religious educational movement* during the school year and the vacation church school show steady development where churches provide the rooms needed for effective educational work. It is noticeable

that improved physical equipment is always followed by greatly increased use, provided, of course, the church faces its task of Christian education conscientiously, and provides adequate leadership.

Many churches conduct nursery, kindergarten and even grade schools during weekdays of the school year.

9. Visual and Audio Aids.

Visual and audio education is a field of almost limitless opportunity. Certainly, the church should utilize this interesting and effective educational aid. The field is too great and the recent developments too extensive to do more than point out the importance in the school of a subcommittee on visual-audio aids. Sources of materials and the kinds of equipment now found most satisfactory should be investigated. Write to the International Council of Religious Education for up-to-the-minute information.*

Provision should be made for still and moving pictures. With window shades, forced ventilation and electric outlets, a room is equipped for the use of audio-visual aids.

Wall space may be prepared so that it may serve as a screen and yet not obviously be a screen when pictures are not being shown. In a room where maps are provided, a rolling screen similar to a window shade can be installed on the map rack, provided the screen is of suitable material and can be made rigid.

The use of television in religious education must be anticipated.

10. Dramatization and Pageantry.

Dramatization has long been recognized as a method of good teaching. If it is to become a regular activity of the group, the room for that group must be so built and equipped as to make it possible. This is one of the reasons for requiring a liberal area of floor space per pupil, and equipment which can readily be moved to clear a portion of the floor. If rooms are not of sufficient size, there should be a place provided to which classes may withdraw for dramatic expression.

This phase of activity includes the presentation of the more formal dramas and programs not simply for the education of the participants but for the inspiration and enjoyment of audiences which may attend. A stage and other equipment which will make such activities possible are needed.

11. Recreational and Fellowship Activities.

Fellowship experiences, such as are achieved in group games, pageantry, festivals and athletics, form important productive areas in religious education. Character building programs will include a place for social and recreational life. Such activities are included in the program of the church school not for mere amusement or as bait to attract new members, but because of the opportunity which they present for promoting physical welfare and development fellowship, co-operation, self-

* See *Saturday Review of Literature*, Sept. 11, 1948, for excellent bibliography on audio-visual materials.

control, honesty, fair play, and other desirable habits of character. Good health has a vital relationship to religious experience.

THE IMPORTANT MATTER OF FURNISHINGS AND EQUIPMENT

The forethought and care requisite to the successful planning of the building are no less necessary in the selection of its furnishings and equipment. The best buildings may be disfigured and made to appear cheap and tawdry by unsuitable furniture.

It is poor economy and unwise planning which permit an outlay of thousands of dollars in a building to be crippled in effectiveness or in its inspirational tone and beauty for the sake of saving a few hundred dollars in equipment and furniture.

The task of the architect and the building committee is not completed until proper equipment has been installed in the rooms.

The Equipment Committee

A standing committee on equipment and furnishings should be a part of every local church organization. The first task of this committee is to study. There are excellent books on furniture. These will be read with interest. Sample pieces of equipment will be tested in use. A list of needed equipment, its quality, sizes and finish will be prepared with the aid of the architect. This list and specifications may be used to secure competitive bids from manufacturers. Each item of equipment must be selected for its definite purpose.

Character in Furniture

In character the equipment and furnishings should be worthy of the cause to which they are dedicated. Equipment should not be showy or ornate; it need not be elegant or luxurious, but it must be good. It should not be easily marred or defaced. Some of it will receive severe usage and, so far as possible, all of it should be designed like the building, to last indefinitely; but long service should leave its mark in mellow tones, not in scratches, splinters, discolorations and breakage. Refinement, sincerity, genuineness should be reflected.

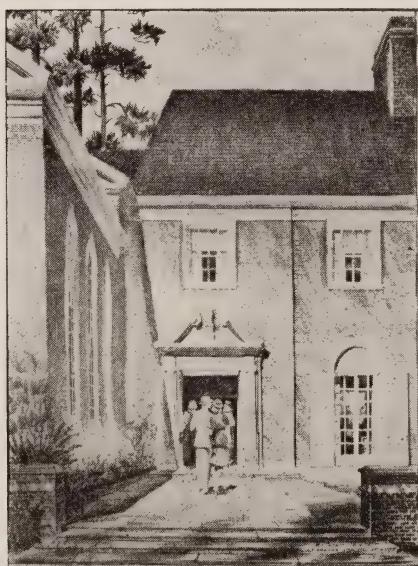
In selecting furniture suitable for churches, there are minor points quite apart from the dimensions and general design, which, like the tailoring of a suit of clothes, disclose its quality and collectively give it tone and character. Among these points is its mechanical construction. Durability is not a matter of weight or massiveness or great strength of some parts, but of that care and reliability of construction which insure that there is no particularly weak part or joint.

Care and thoroughness in the rounding of corners and edges are not only an evidence of high grade construction but are essential to comfort and good posture. A sharp line of contact under the thighs or across the back both indicates shabby workmanship and foretells restless

discomfort for the user. Sharp corners on legs and rungs cost much less to make than carefully rounded and sanded edges, and they look cheap; they are not pleasant to strike against; and in use they splinter with disastrous effects on clothing. Curves cost money and always represent more planning and labor than do the square sawed sticks and boards, but the human anatomy is bounded by curves and straight lines cannot fit it.

Much of the labor of making good furniture goes into the smoothing operations which are necessary to bring out the beauty of grain and to secure a refined and finished appearance. Fine surfaces cannot be made with paint or varnish; they must be made on the wood itself, and they cannot be made on inferior wood. Painted surfaces are superficial and shriek of shallowness whenever scratched. Thick, shiny varnish over a poorly selected or finished wood is even more offensive to good taste and a love of genuineness. It is very likely to become sticky and to injure clothing, and it easily gets discolored and disintegrates under the influence of heat, moisture, perspiration, or usage.

In a chair suited for school use as distinguished from lounging, the size and design should be such that the most wholesome, alert, and attentive posture of the occupant is at the same time the most comfortable and least fatiguing. This is the case when, with the muscles completely relaxed, the body weight is poised about the erect spine and is carried on the seat bones while the weight of the legs is carried by the feet resting on the floor.



"Close up" sketch of a detail of cut on page 114.
Figures of persons in the architects' sketch are to help us estimate the scale of the building.



Proper Back and Seat Forms

An essential condition of comfortable sitting in an erect position is well-shaped support in the small or hollow of the back, at and just above the height of the top of the hips. With this support, if one sits well back against it and relaxes completely, the pelvic frame is kept in a vertical position, the weight is balanced about the spine, the shoulders fall back and down of their own accord, the chest is expanded and deep breathing assured, and all the vital organs have full space for functioning freely. Without this support in the small of the back one inevitably tilts the pelvic frame backward and bends at the waist, shoulders hang forward, chest is flattened, and all the vital organs are more or less compressed and restricted; all of which reduces vigor, engenders lassitude and makes energetic attention difficult.

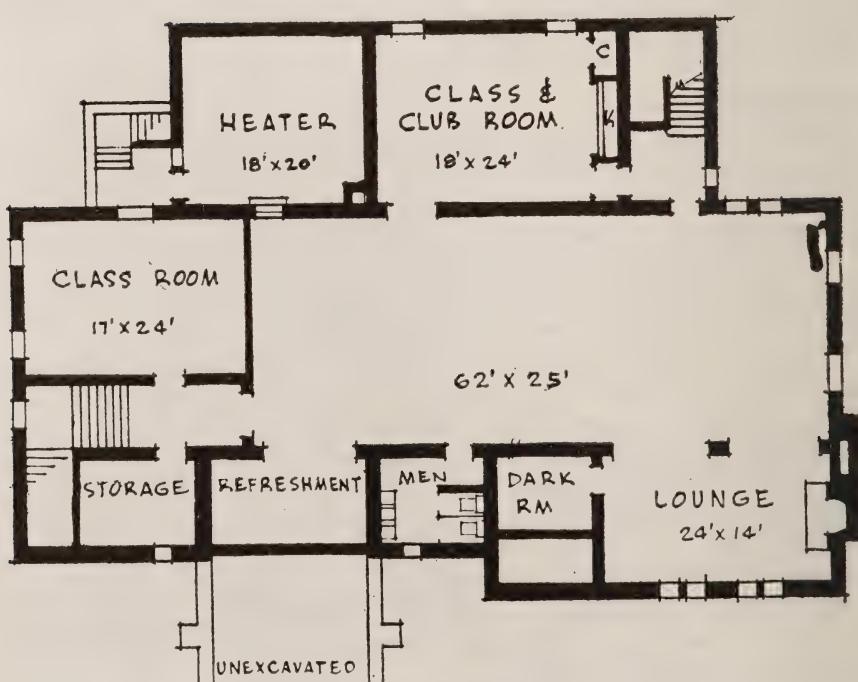
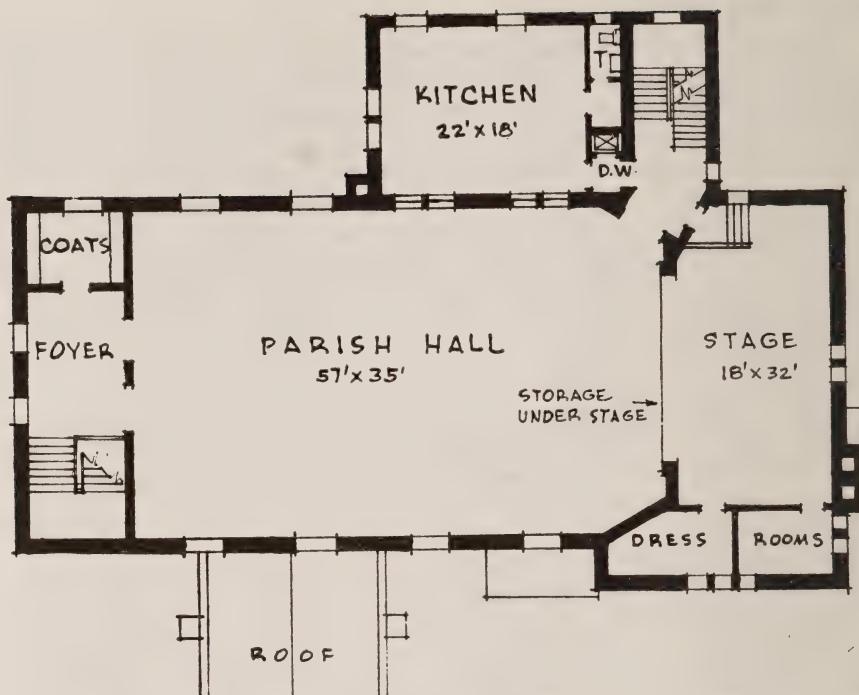
No chair back which is built in a straight line from the seat to top can possibly give the sort of support which makes for erect posture. While there should be shoulder support when one leans back, the essential support is a well-rounded form which fits the back between the hips and shoulder blades.

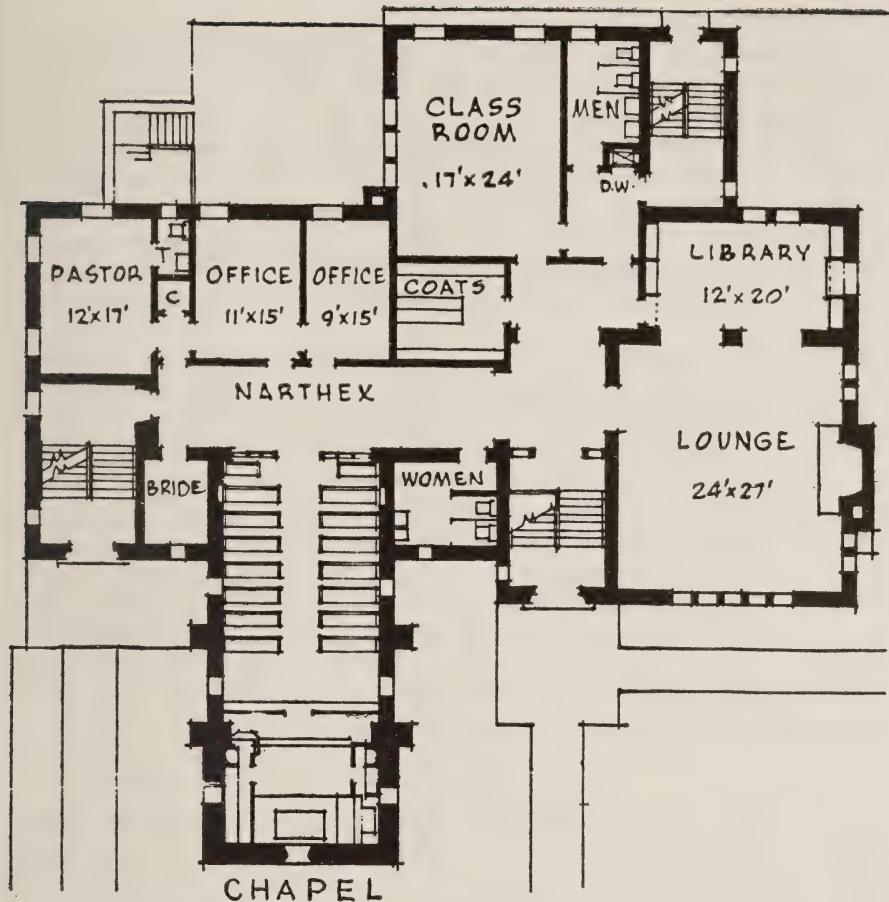
But however good the back support, it is futile if the seat is so long, from front to back, that one cannot get near enough to the back to use it effectively, or if there is an elevation at the rear of the seat or the seat is so flat that one slides forward by the force of gravity. A good seat has a pronounced backward slope, is shaped to carry the body weight wholly on the ischia and thick part of the thigh muscles, and is short with a well rounded front edge. In such a seat erectness is the most natural and comfortable posture.

Seat Height

A first essential to this posture is that the seat shall be low enough for the feet to rest on the floor without any pressure from the seat under the knees. The least such pressure quite definitely tends to restlessness, and bad posture. If it is well formed and sloped, there may be an inch or two between the highest part of the seat and the leg behind the knees without the least discomfort or disadvantage. We should, therefore, *make sure that the seats are low enough.*

In any considerable group there will be a few who might well take larger chairs but there is no advantage in their so doing. Most wood chairs for adults are made in the traditional eighteen inch height, which is too high for the comfort of most women and a large percentage of men. Since it is quite impossible to keep twenty-five loose chairs of assorted sizes properly distributed among a similar assortment of children, it is better to keep in mind that high seats are always bad but low ones, if properly formed, are safe, and to have but one height of a chair in a room; or, if the variations of pupil size are great, two sizes differing by not less than two inches. Too great a variation of the size of chairs within any one room is not advisable.





E. F. Jansson, Architect

Plan for a Students' Religious Center

This study sketch plan may be suggestive also for a parish house addition to an existing church or a "first section" of a new plant. The architect has skillfully packed a splendid collection of rooms and facilities into this scheme.

The fellowship and recreation hall is directly under an open timber roof construction which spans the room and gives a ceiling sufficiently high for the activities to be conducted.

(Second and ground floor plans on opposite page.)

Portable Seating

There are innumerable folding chairs on the market and "portable chairs," which are the same thing combined in units of two to five individual seats. Some of these are very cheap and most of them are noisy and extremely uncomfortable. The frightful cost to the nation in loss of religious zeal and interest due to cheap, flat-folding chairs can never be calculated. When the average adult spends most of his life in cushioned swivel chairs, overstuffed home furniture, or luxurious theater or automobile seats, it is not to be expected that he can readily adapt himself to quiet concentration and contemplation in these ill-shaped torture seats.

There are a number of very comfortable and satisfactory lines both of the individual folding chairs and portable group units. Some of them are well finished and attractive in design and are comfortably upholstered. The best of them have practically eliminated squeaks and noises while in use and reduce the probability of breakage to the minimum. If carefully selected, they may be recommended for those rooms which require compact seating, in which the chairs must be quickly set up and readily stored away in the least possible space. A flat folding bench, correctly designed and proportioned, comparable to a pew when opened and to a couple of flat boards when closed, would be a useful contribution to church school equipment, particularly for the recreational auditorium. Folding chairs should not be used except where necessary and only as many as necessary, never in the children's division.

Tables

Tables have an important place in the equipment of church schools. The essentials of a good table are that it should have an attractively smooth finished top, with no drawers, stretchers or other structural parts under the top in way of pupils' knees and thighs, with legs set as far as practicable out of the way, and with all parts which can come into contact with the pupils' hands and legs well rounded, so finished that they do not become splintered.

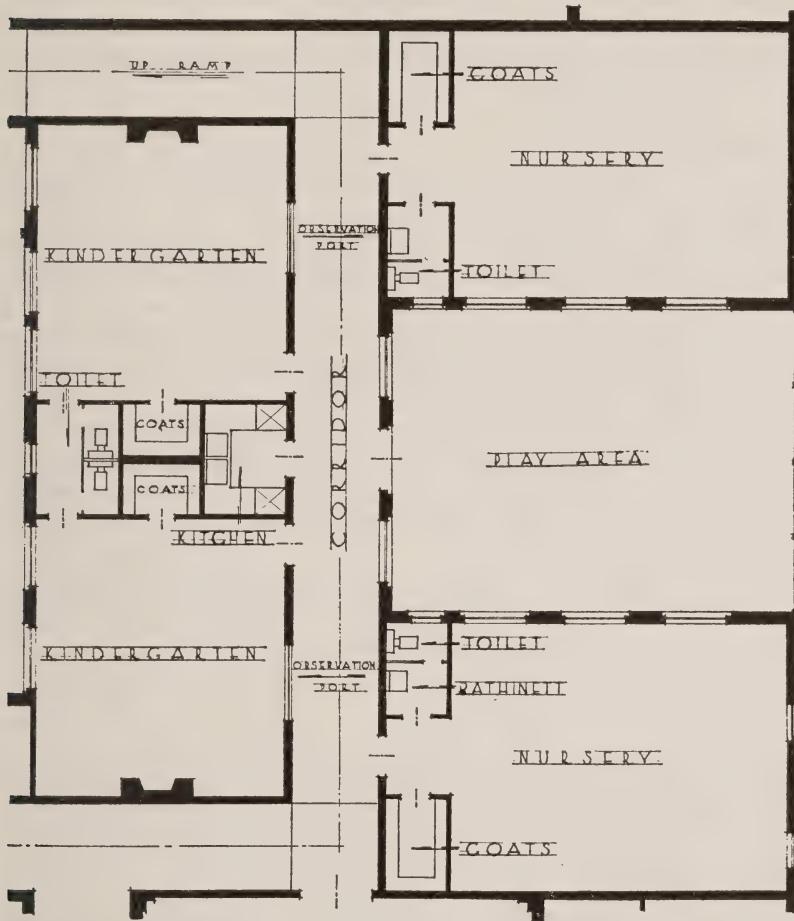
If it is necessary to provide some storage space for books or supplies at the table a shallow shelf set well under from the edge and not more than about three inches deep may be provided, though any obstruction under the table top may be in the way.

The table top should be approximately ten inches higher than the chair seat in all grades, being twenty inches high in the kindergarten and not more than about twenty-eight inches for adults. This is the best average height for writing purposes though the correct measure for individuals in all grades will vary.

The table and chair arrangement should permit variation in the work. Pupils may work at a table or away from the table as the case may require and almost the entire floor area may be cleared by pushing tables against the wall.

Small rectangular tables permit easy rearrangement of furniture and

Plans for Nursery and Kindergarten rooms
Munsey Memorial Methodist Church, Johnson City, Tenn.
(under construction 1948)



This church with a successful nursery school in the present old building is planning for a weekday kindergarten and nursery school in their new building. A slow study of the plan will indicate the facilities needed in the rapidly growing movement for weekday schools in Protestant churches, Abernethy, Johnson City, Architect; A. H. Fink, Consulting Architect.

great flexibility of use. Round tables are wasteful of floor space, cannot be arranged with reference to the windows so that a majority shall not have bad lighting conditions, cannot be combined to provide for flexibility in the size of table groups, are either limited to a small sized group or else have a large, useless and inaccessible central area, are unwieldy, difficult to handle, and are relatively more expensive. Tables must be easy for teachers and children to handle.

In the old type of Sunday school organization which many classes

were crowded into a single noisy room, it was necessary for teacher and pupils to go into a huddle with heads as close together as possible in order to communicate with each other. For this sort of class there was developed a type of table with a recess cut into one side in which the teacher sat with six or eight pupils as close to her as it was possible for them to get. This table has no rational place in the equipment of a school of the modern sort.

Teacher's Table

A teacher's table of light and readily movable sort is necessary in every classroom. It should be of a material and design in harmony with the pupils' equipment approximately two by three or four feet in surface area and twenty-eight inches high. Some leaders prefer a lower and smaller teacher's table for groups of small children—one of which is about eye level for the children when seated. There should be an open shelf underneath for convenience during the class period but no drawers, cabinets or other storage facilities built into the table.

We find some differences of opinion among church school workers regarding these important items. Some are again asking for round tables. In the changing, moving work of education one must expect differences of opinion and experiences. Sometimes you must let your conscience be your guide.

See also the new book, *The Church School and Parish House Building*, published jointly by the Bureau of Architecture and the International Council of Religious Education—1949, \$1.50.



A browsing table is considered an important means of interest and learning.

XVI

THE HOUSE OF FELLOWSHIP

"Jesus increased in wisdom and stature and in favor with God and man."

"Your body is the temple of the Holy Spirit."

The above lines have been taken as a warrant for the Church's ministry to the whole person, including the planning of experiences of Christian fellowship.

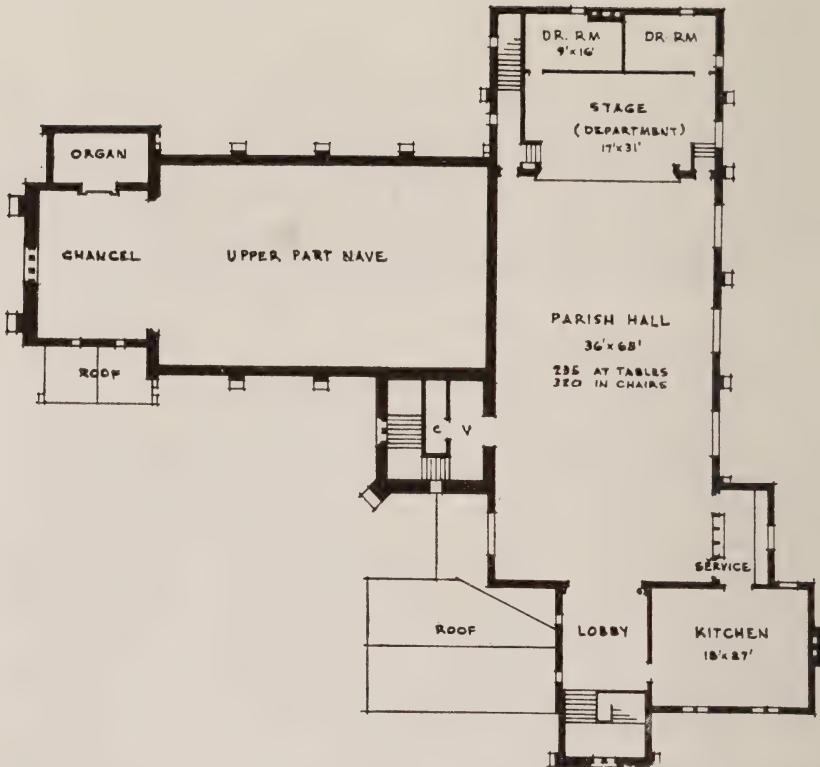
The church cannot perform to the desired degree of success its work in character building and religious culture apart from a well developed recreational and social program. The church cannot relinquish to non-church agencies a ministry so vital to religious living and growth. The recreational work of the church is not to be planned merely for filling in time. The needed recreational program must be integrated into the total religious work of the church which includes also the ministries of worship, religious education service, pastoral work and administration. Many churches need to develop a religious conviction regarding the necessity of church directed recreation.

Such essential elements in character as complete honesty of action, fair play, cooperation, team work, loyalty and other excellencies of character, can effectively be taught and experienced in recreational work as conducted by religious leadership, and this work is not to be separated from the principal work and purpose of the total church program. The possibility of increased leisure time in our modern civilization will increase the importance of recreational work.

Building Healthy Christian Personality

The church through well planned social and recreational activities can help its people to avoid the mire of frustration and irritation, inner rebellion, and disloyalty that cause personality problems. Broad programs of recreation may provide a means of release from petty irritations and direct interest into constructive channels.

Through recreational and social programs the church can help keep the daily life of its members free from hampering attitudes and actions and point the way to challenging adventures in living. The church must help fill the life of the person who lives in a busy, noisy world, with satisfying activity. Opportunities should be presented for self-expression and for sharing in the activities included in church-directed recreation, such as dramatics, music, pageantry, crafts and arts.



E. F. Jansson, Architect

Plan for a Second Floor Fellowship Hall

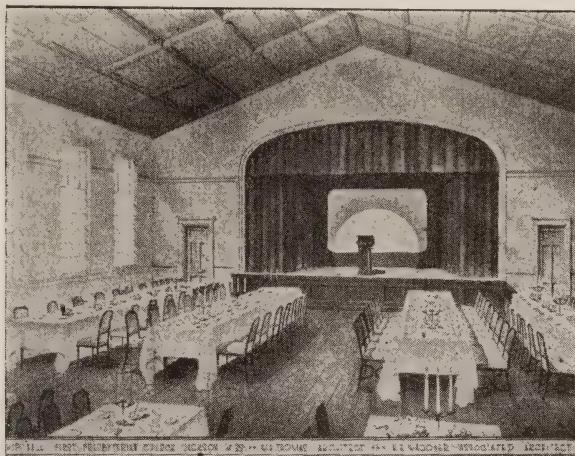


Bolton & Son, Architects

Fellowship Hall, St. Paul's Methodist Church, Niagara Falls, N. Y.

Note large stage with table storage under, detachable basket ball equipment, sound motion picture screen, walls and ceiling of durable materials.

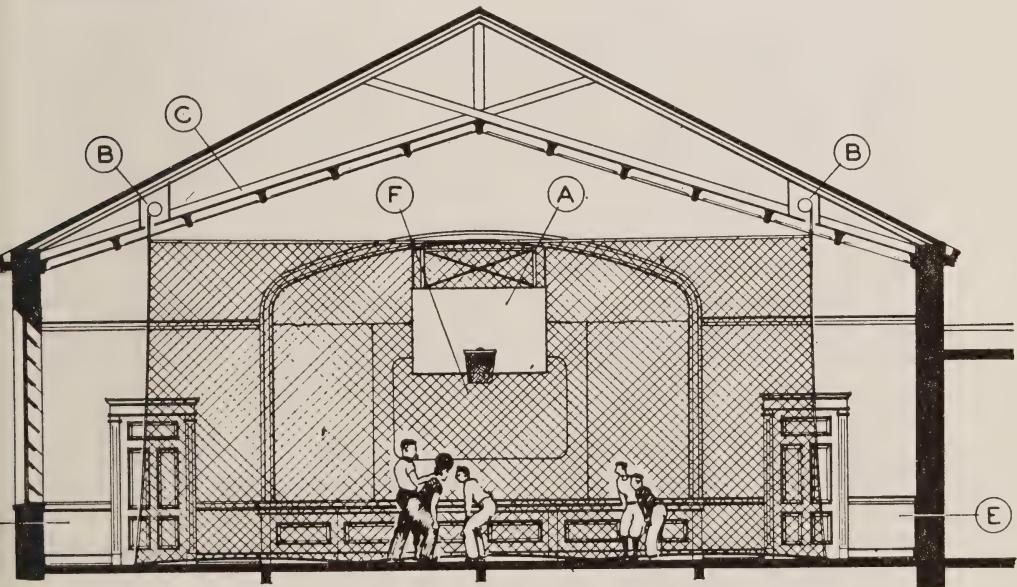
Sketch of Fellowship Hall, Highland Presbyterian Church
Fayetteville, N. C.



H. Wagener, Architect

The folding chair shown is expensive but helps give character to the room when used for fellowship suppers. A roll down net protects the stage and thus provides spectator space for athletic events. Storage space under stage. Acoustical ceiling. Light fixtures flush with ceiling.

The fellowship hall with stage and kitchen is needed by every church. It should never be in a basement.



H. Wagener, Architect

Cross Section Plan of Hall

A thoroughly suitable fellowship hall provides for a broad program of character-building activities.

A—Backboard and Basket—hinged to remain out of sight behind proscenium arch when not in use.

B—Rollers and Pocket for nets. C—Roof and truss. E—Spectators' space.
Note high ceiling possible in this type of construction.

The Rooms and Facilities Needed

The decision as to recreational equipment needed should be reached with respect to the needs of each individual church and not by any generalized opinion.

The small church needs a fellowship hall with a minimum unobstructed floor area of 30x50 feet, minimum ceiling height of 14 feet, and a stage and kitchen. In such a room, which we do not call a gymnasium, a great variety of group games, athletics if desired, motion and still pictures, pageantry, dramatics, concerts and fellowship suppers, may be conducted.

Many churches will need a larger fellowship hall. Churches in thickly settled communities where play space is limited may need a gymnasium. The presence in the community of a gymnasium for match games may indicate the need of a church gymnasium or general purpose fellowship hall for practice games besides the many other occasions an effective church will use it. Even in the average size church a combination hall, with a stage in addition to the dining hall, is often needed. Equipment, however, such as bars, rings, etc., is not now in demand. If there is only one social hall in an active church there may be many conflicts in the needed programs. Many building programs should provide for the future addition of a second hall and other rooms. A gymnasium should be built above the ground and must be attractive and well ventilated.

An Attractive Fellowship Hall May Do Double Duty As a Gymnasium

By the use of modern building materials, a beautiful recreational hall can be constructed of materials that are colorful, that have sound absorbing qualities, and that also are durable. Metal grilles can be placed inside the windows for protection when the room is used for certain types of athletics; when opened, the grilles are ornamental. Or, windows may be so constructed that they will not be damaged by basketball or other equipment.

A very practicable plan for a recreational unit of the church plant may be described somewhat as follows:

A two story section of the church plant with a ground floor not more than 4 feet below grade with ceiling height of 9 feet. This means that one climbs 6 feet of steps to reach the main floor. Or, the approaches to the entrance may be graded upwards so that a few feet of stairs need to be climbed.

On the lower floor there may be bowling alleys, rooms for floor and table games, lavatories, craft and hobby shops, dark room, boys' and girls' club rooms and if there is sufficient space, adult class rooms. This section of the building must be of damp proof construction and well ventilated. See page 133.

The general purpose fellowship hall with stage and kitchen may be placed on the main floor of this unit of the building. A stairway leads from the stage to the lower floor where some of the rooms will be available as dressing rooms.

The ceiling of such a room can be rather high because the roof structure forms the ceiling line.

It is not advisable to place the fellowship hall on a basement level, or beneath other rooms. It is important that the ceiling height be sufficient to permit the construction of a platform (36 inches high) and to permit such recreational activities that the present or *the future* work of the church may require.

Sometimes the program planning must be delayed until the congregation is brought to an understanding and conviction respecting the importance of adequate provision for social and recreational work in the building plans.

A wealthy and influential member of a building committee for a very large church insisted on having hanging light fixtures in the fellowship hall, hoping that thereby it would be made impossible to use the room for certain kinds of recreation. When the youth groups learned of this brother's obstructive tactics, the congregation quickly demanded that the room be equipped with lighting fixtures set in the ceiling where they could not be damaged if basketball should be played there.

Bowling alleys, wherever installed, are much used by all age groups and both men and women. Rooms are usually needed for floor and table games. Several of these rooms are used by adult classes on Sunday.

Ventilation of all rooms used for social and recreational activities is of the very highest importance.

The Church Parlor

A parlor is very important. It should be provided with a kitchenette, unless the kitchen is located between the hall and parlor. By all means have a fireplace even in the very smallest church. Nothing can equal a fireplace as a center for discussion groups or just good fellowship. Built-in book shelves add to the appearance and usefulness of the parlor.

A lounge for informal meetings, "chatter parties," properly supervised, and a reading room may be very useful, and much nicer than the drug store. But let's never call anything in the church a "bar"—milk bar, or other bar.

Many of the social and recreational rooms may be used by adult classes. Department rooms and wide corridors may be used for singing and informal sociability and recreation.

Excellent recreational programs can be conducted in the out-of-doors. Playgrounds, outdoor fireplaces and equipment for outdoor work are very important. Some town and city churches are acquiring land in the country for parts of their program.

The Swimming Pool

Swimming is an increasingly popular form of recreation. In one institutional church in a crowded city section, the total attendance in the swimming pool in one week was 1,400. Further study must be given to the subject of swimming pools in churches before general conclusions

can be drawn. Other institutions that furnish social and recreational opportunities emphasize the importance of this sport, however, and one wonders why a greater number of churches have not ventured into this field. Surely a lot of church money has helped to build pools in country clubs, Y.M.C.A.'s and lodge buildings.

The Munsey Memorial Methodist Church in Johnson City, Tennessee, is erecting (1948) a parish house, the first unit of a new plant, which includes a swimming pool.

Trinity Methodist Church, Springfield, Massachusetts, has had more than twenty years of successful experience with their pool.

The First Presbyterian Church, Modesto, California, reports that their swimming pool is very useful.

The cost of installing the pool and auxiliary equipment such as showers, dressing rooms, etc., the cost of the space required, and the cost of maintenance must be weighed against the service values it will make possible.

EQUIPMENT FOR DRAMA AND PAGEANTRY *

The Values of Religious Drama

This part of church work is so rich in religious and social value that the church building consultant or leader may well do some preaching, if necessary, so the congregation will become convinced to a degree sufficient to insure making adequate provision for it in the planning program.

Religious drama is one of the most valuable aids for presenting religious truth in a vital form. Drama and religion need each other. Drama needs more vital themes. Religion needs drama as an aid to teaching and worship.

The increasing use of drama in the Church is related to the newer techniques in secular education in two ways: for the participants, it exemplifies the project method, learning by doing; for the audience, it is visual education.

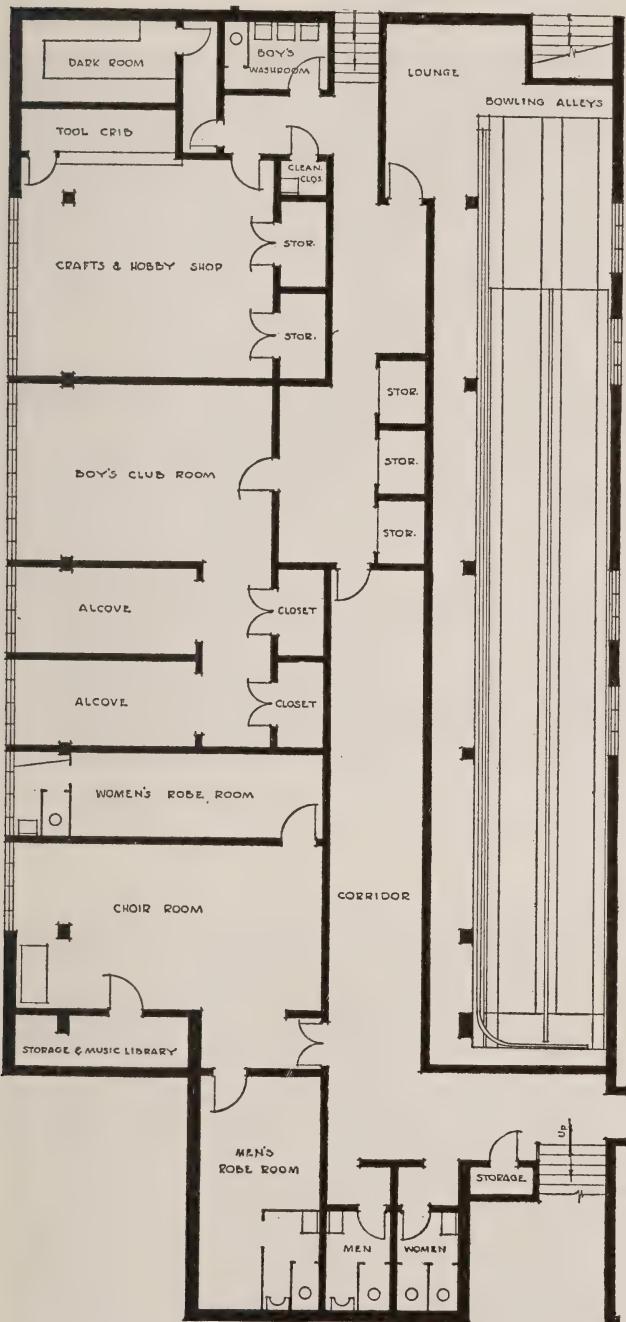
The Church does not wish to or need to compete with either the theater or the public schools, but the Church has successfully used and adapted other techniques learned from secular education.

In its highest form religious drama is an art, comparable to other arts used in the service of religion; painting, architecture, music and elocution. As a great art it must be taken seriously and given proper facilities if its real values are to be realized.

Religious drama consists not only of dramatized Biblical stories, but other types as well: the prepared play of dramatic form definitely written for the Church; the pageant, involving larger numbers of performers; the visualization of directly educational purpose, and the liturgical play intended for or limited to the chancel.

* This section prepared with the aid of Walter A. Taylor, A.I.A. See also *The School Auditorium as a Theatre*. U. S. Office of Education.

Sketch for Ground Floor of a Recreational-Educational Building



The excavation to be only 3 ft. below grade. Ceiling heights of rooms 9 ft.
Bowling alleys in sound proofed section. Note that the wall at the left is composed of windows.

This division of the subject, between the sanctuary and the social hall, comes about also in relation to the customary study of the church requirements for the three-fold program of worship, religious education and social recreation; the last two being housed in the social hall, so far as dramatics are concerned.

Practical Provisions for Dramatics and Pageantry

The practical provisions for dramatics may be considered under two headings: "The Social Hall" and "The Sanctuary." Serious consideration of dramatics in the church social hall will affect the general planning of the whole building in three ways: (1) The hall will be more frequently used as a place of public assembly. It should therefore have direct entrance from a street without necessity of opening other parts of the church building. The entrance should be obvious for the person who is not a member of the church. (2) The several other uses of the social hall should not interfere with the efficient use of the stage and adjoining spaces. For example, the kitchen and serving pantry may have to be located adjoining the opposite end of the hall. (3) Care should be taken to avoid acoustical difficulties which might result from proportions and interior finish.

The stage is the important working area, and when the church has limited budget, space should be provided even if the purchase of proper equipment must be postponed.

A stage to be of real value should be at least eighteen feet deep, twenty-seven feet wide and fourteen feet high. This should be borne in mind in planning the whole building in relation to seating capacity and site restrictions. The stage should be larger than this minimum.

The most common error in planning the social hall stage is to omit wing space by placing dressing-rooms or stairhalls in line with the proscenium arch. Such a stage is of very little use excepting as a lecture platform. The stage should be at least five feet wider than the proscenium on each side. The dimensions of the proscenium opening will be somewhat dependent upon the architectural design of the hall, but should be at least twenty feet wide by twelve feet high above the stage.

A stage used only for dramatics should be four feet or three feet nine inches above main floor for a large hall. However, for general use, and in the social hall of average size, it may be as low as three feet.

The apron or projection of the stage beyond the arch should be three feet. For general use as Sunday school assembly, steps should be provided directly from the main floor to the apron.

Adequate space for storage of scenery will prevent damage to the scenery and encourage tidiness and good appearance for other uses of the hall. A long slot in stage floor at rear wall covered by a trap door permits convenient painting of scenery in a craft shop below without use of scaffolding. A room under the stage may then be a general property room and general dressing-room, available also as a project workshop for other activities of the church and school.

**Recreation Room, Trinity Methodist Church,
Youngstown, Ohio**



Lights flush in ceiling, recessed radiators, removable screens for windows, ceiling height of 18 ft make the room available for many kinds of group activities.



A Church Parlor

Next to the family, the church should be the most precious fellowship in human relations.

A Youth Center



Knotty pine wall finish. Colorful wall paper above the Colonial seat in the corner. A splendid, durable rug and fireplace help to make this room an asset of great potential value for many different uses.

Reading Room, Trinity Methodist Church, Youngstown, Ohio



Designed by A. H. Fink

One wall is of acoustical material which is decorative and makes the room more quiet.

Certain structural details are best provided by the architect in the general contract for the building: pipe-rails or battens, length approximately equal to proscenium width, securely attached to the ceiling at intervals of seven feet from the front; a finished stage floor of soft wood, pine or spruce, which will readily take screws or nails for scenery or properties.

The curtain should be of opaque material, lined, if necessary. Too often the curtain is semi-transparent. The architect must provide proper supports and hardware for the curtain and the cyclorama.

Contemporary drama depends as much or more on lighting than on scenery and properties. Some of the production values which depend upon proper quantity and control of light are composition, atmosphere, emphasis, color and three-dimensionality. Some of the lighting equipment will be provided in the general contract; borders (horizontal overhead) and strips (vertical at the sides) in two or three circuits for color variation. Footlights are not desired. There should be ample outlets on the stage and in the rear gallery for spotlights and floodlights.

All of the house and stage lights should be controlled from one switchboard so located on the stage that the operator may see the action. The switches should be noiseless, and there should be rheostats on the main circuits, including the house lights, as well as local rheostats on the flood-lights.

There should be a minimum of two dressing-rooms, with an additional large room for general make-up and costuming. If necessary to ensure ample wing space, the dressing rooms may be on another floor, provided that they have easy access to the stage. Classrooms in an adjoining part of the building may be used, or conversely, the dressing rooms near the stage will have windows in order that they may be used as classrooms.

As in all parts of the church, there should be ample storage for properties, scenery and costumes. There should be "a place for everything, and everything in its place."

Dramatics in the Sanctuary

The type of drama required for the sanctuary conforms more nearly to our definition of religious drama, "a means of ministering to the souls of men," and is much more serious than the typical Children's Day pageant. Since these plays are definitely not of the entertainment type, they are not in conflict with the growing desire to reserve the sanctuary for worship, and to avoid using it for concerts, lectures and other secular purposes.

There is very good precedent for plays in the chancel in the Biblical and the liturgical plays of the Middle Ages. Some of these are revived and new ones are written, some require the altar as part of the setting, in others it is more appropriately screened.

The strong liturgical trend in Protestantism aids drama in the Church to the extent that chancels are now being built where there were none before, or existing shallow chancels are made deeper. Many churches will no doubt feel that, whatever the type of play, a part of the chancel

should be reserved from such use, the altar, the altar table, or the baptistry. For this the architect may utilize the mediaeval rood screen, or other architectural division, but place it between the choir and the altar.

The definite items of equipment which the architect should provide in the sanctuary are few in number but important. The normal lighting of the chancel by concealed fixtures inside the chancel arch will generally correspond to border and strip lighting. Ample outlets should be provided in several locations, including rear gallery, for spot and floodlights. A curtain and footlights are undesirable and usually not necessary. Scenery is usually limited to portable folding fabric-covered screens.

In general, the architect should plan the chancel with dramatic requirements in mind, but without permitting these requirements to do violence to the architecture and liturgy.



Design for a General Purpose Fellowship Hall



XVII

THE CHURCH, A CENTER OF CHRISTIAN SERVICE

Building for Special Needs

In some places, particularly in congested centers, there is a need for church plants in which service and educational activities require a major proportion of the space. Such facilities as rooms for clinics, boys' and girls' club rooms, library, assembly halls with provisions for dramatics and motion pictures, class rooms, parlor with fireplace, domestic science department, gymnasium, music rooms, and living quarters for workers may be required. There is often a need for "quiet" rooms for reading and browsing.

Religious ideals should control the design of the entire plant. The sanctuary or chapel should be well designed for purposes of public, group, and private worship. The chapel or worship room should not be hidden or its importance minimized, even though it may occupy a small part of the total volume of the building. "Let the church be the church" in all of its work, and in its architecture. A gymnasium or bowling alley, if in a church, should show in some detail of design or symbolism that it is a part of the House of God.

A cold "institutional" feeling in exterior and interior design should be avoided. Careful attention should be given to interior decoration and lighting. Too many so-called institutional churches are dark, dreary places, totally unrepresentative of the Christian faith. Modern building materials such as tile in different colors make it possible for buildings that receive very hard usage to be attractive.

As in all cases of church planning, community needs for religious service should determine the program of rooms and facilities to be provided. Visits to other institutional churches may offer suggestions but a survey of needs in the community to be served will be the best guide for formulating the program of service to be rendered, and the program of work will determine the rooms to be needed. However, the program and needs are likely to vary in each situation.

Institutional churches need ample storage facilities. This feature will help make possible the using of several rooms interchangeably for various activities.

The week day nursery and week day kindergarten are very important in some institutional churches, with provision for displays of children's work and sufficient space for children's recreational and other group activities.

Income-Producing Plants

Fortunately, in the present tremendous program of planning new church buildings and improvements in the United States, we have yet to hear of a church proposing to erect a business block or hotel, including church facilities in it and expecting the income from the plant to help pay the current expenses of the church. The many financial tragedies that accompanied such projects in former years should be sufficient warning to any church tempted to enter the world of competitive business. Again we say, "let the church be the church" and not enter into competitive business requiring expert management which is not usually engaged. If the church will invest the funds that an income-producing building will cost, at 3 per cent interest for an endowment, they will be much better off than to engage in a real estate, apartment house, office building, or hotel business. The writer after an observation of church work for twenty-five years can, under no known circumstances, recommend that any church embark upon an income-producing building program. The Church Building Committee composed of church erection boards of twenty-five or more denominations unanimously sustain this opinion.

Yet again we must say that every project should be individually studied and determined.

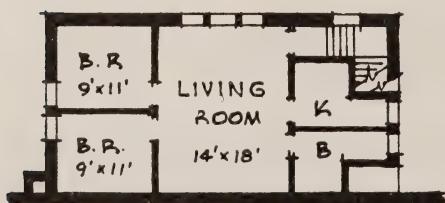
Student Centers

Several religious buildings are being planned near college and university campuses to provide a social-religious center, usually where the denomination does not have a church building near the campus. In some places religious courses of study with college credit are conducted. Rooms for social gatherings, a lounge, classrooms, pastors' conference rooms and living quarters for workers and game rooms are usually needed.

A chapel should always be provided. In its design and equipment the strictly worship and devotional purpose of the room should clearly be indicated. A small prayer room will be useful. The presence of the chapel and prayer room will help to maintain a religious atmosphere throughout the entire building.

A bride's room for weddings is important.

As in every other situation, the needs of the local program determine the plans. Great care must be given to exterior and interior design so that the plant be identified as a part of the church establishment.



Caretaker's apartment

XVIII

THE ROOMS FOR ADMINISTRATION AND PASTORAL WORK IN THE CHURCH BUILDING

The administration of an institution like a church, with as many members as some colleges or Y.M.C.A.'s and with the most complex program of all human institutions, requires an adequate staff, enough rooms, and proper equipment for efficient administration, and for rendering the pastoral ministries needed by all types of persons in a near crazy world. At least one church now employs a psychiatrist as a full-time member of the pastoral staff.

Compared with the educational work alone of a church, a high school is relatively a simple institution. The school has its pupils for only four years, while the church is concerned with growing persons of all kinds from birth to death.

The church is an expanding institution which performs many functions in the community. This should all be considered by the building program committee in planning adequate rooms for the administration of such a unique institution as the Protestant Church.

Rooms should be provided to be used as needed, for additional staff members. The Church of today is an institution of tremendous importance. Hundreds of people, even in the church of average size, may enter the building for various services and ministries during a week. The rooms provided for the staff members must not be too small. When planning floor space, consider the clear working area after book shelves, closets, etc., are deducted.

The General Church Office

The church office should be located as conveniently as possible to the main week-day entrance. Other details regarding the church office will be found in Chapter XXII in connection with the building program.

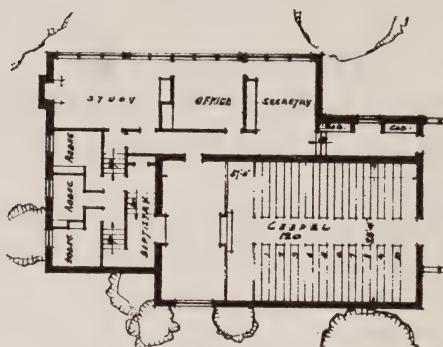
Increasingly, churches are employing full time financial secretaries. Such a helper should have an office where he will be protected from interruptions. It might be adjacent to the main church office.

Desks, files, etc., for the general superintendent and other officers of the church school should be in the church office.

The Pastor's Conference Room

A very essential room in the church building is the pastor's room, to be used for personal and family counseling. Increasingly modern pastors are trained by schooling and experience how to advise members in their

Chapel and Administrative Unit
Preston Road Christian Church, Dallas, Texas



Tatum, Alexander and Quade, Architects

This group of rooms, chapel, baptistry, two offices and pastor's study-conference room will be included in the unit of a group of buildings first to be erected.
See page 50.



The Pastor's Consultation Room, Trinity Methodist Church, Youngstown, Ohio

day by day life problems as well as in spiritual needs, since the two are so often closely related.

The conference room should be cheerful and comfortably furnished and large enough to accommodate four to five persons without crowding. A fireplace and attractive pictures help provide an atmosphere that will contribute to the effectiveness of the room for its important purpose. This room should be equipped with clothes closet, book-shelves and a lavatory.

Besides the pastor's counseling room, which should be provided even in the smallest church, it is desirable to have a private study in his home or in the church building. The pastor in one church climbs a ladder to reach his study, high in the church tower, where he can go for undisturbed work.

There is a growing trend to place the pastor's room on the second floor, where it is accessible, but protected from too frequent interruptions. When located just off the main church office or on the main floor, interruptions, the noise of traffic, and work in the building may be too distracting.

The Music Department—See Also Chapter XXII, The Building Program

If a minister of music is maintained he may use the choir rehearsal room as his office and for individual and class instruction during the week.

Sometimes, as a church grows and increases its staff, rooms at first used for church school classes may later be assigned for staff use. It would be well for these rooms to be planned in advance so that change of use will be possible.

The church library and reading room is increasingly recognized and appreciated as a means of important service (see Chapter XXII).



The Small Church Can Be Distinctive

XIX

ORGANIZING THE LOCAL CHURCH FOR THE BUILDING PROGRAM

The very first step in a successful building program is to secure the best available consultation service. Perhaps such service will have to be secured through correspondence. Protestant church leadership has been slow to supply "evangelists of the House of God."

The Work of the Church Building Consultant

Before the architect comes, plans secured, or definite decisions made regarding even the smallest building improvement, it is important to have at least the following work done:

1. Organization of a forward movement council for the study, promotion, financing and construction of the project.
2. A study of the church activities and methods found successful in worship, Christian education, fellowship and service ministries.
3. A study of the community, the population by age groups, population trends, religious census, trends in industrial developments, etc.
4. A study of other churches and institutions in the community to help determine the needed program, and possible comity arrangements.
5. An evaluation study of other church building projects in similar situations.
6. Prepare a statement of the needs of the activities and groups to be provided for and the rooms and floor area required for each. A consideration of possible remodeling or enlarging of the existing building.
7. A study of possible locations and sites.
8. An estimate and development of financial resources.
9. Prepare to promote the program among the church constituency and in the community. A display of illustrations of various types of buildings, rooms and equipment with lantern slides, blueprints, photographs and exhibits.
10. A written statement of the building program so that an architect will know all of the requirements to be provided. A list of possible economies including utilizing space and rooms to best advantage, saving costs by limiting ceiling heights, building by units, etc.
11. A written check list so that nothing will be omitted and changes will not be required after the building is started. Write an equipment program.
12. A plan to make the financial program a means of spiritual growth.
13. Selection of architectural service and builders to be considered.

A glance at this list of items, which by no means is complete, convinces

one of the wisdom of securing experienced and competent counsel before doing anything about the building enterprise.

The "field of responsibility" should be studied and a statement of needs prepared, before consideration of any specific church building plan. The full task of the church should be considered regardless of what amounts may actually be expended.

A CHURCH BUILDING ENTERPRISE CAN BE SUCCESSFUL ONLY IF there is a well directed organization to accomplish the work needed in advance of having preliminary building plans prepared. Each project requires specially prepared plans of organization and procedure, as well as specially prepared plans for constructing the building.

It is never necessary to have so religious an undertaking as building the House of God, accompanied or followed by any undesired features or results. Careful planning in advance of actual building will help to assure a building program that becomes a means of spiritual advance as well as a material improvement.

"Don't appoint a Building Committee, not yet," may well be a guiding slogan at the beginning of a church building enterprise.

What Kind of Organization Is Best?

Everyone in the active congregation should have a part in planning the church. No member of the church should be denied some suitable place in the highly important and very religious task of planning and building the House of God.

The organization suggested here makes it possible to enlist the services and talents of a large group. It avoids "hurting the feelings" of interested members of the congregation who might not be placed on a so-called "building committee." The larger the group of workers engaged in the advance movement, the greater the enthusiasm and understanding of the problems involved. The financial support for the enterprise will be strengthened as the whole congregation realizes what is needed.

These suggestions are in extremely brief form. Each church should assemble a suitable plan of organization and list in detail the duties of all committees, and prepare at least a tentative time schedule for their work.

Enlisting the Workers and Getting the Organization Under Way

An inspirational meeting might be held for all who are invited to enlist in committee work. A written statement of the duties and responsibilities of each committee and of the entire congregation should be presented to all. All items that will need attention should be noted, then assigned to the several committees.

A Proposed Plan of Organization

A—The Church Building Council, or the Forward Movement Organization, including the members of all committees.

B—The Executive Committee, seven or more members acting for the

church as the church may direct. It may be composed of the chairmen of the working committees and the chairman of the council. The pastor should be an ex officio member of all committees. Employed staff members are to be members of all committees concerned with their areas of work. The chairmen of all committees should have an advisory relation to the Executive Committee and report regularly to it.

C—The Working Committees. (Sub-committees will be needed in the work of some of these committees.)

1. The Survey Committee, to conduct a religious and community survey. Make a thorough study of religious affiliation of the population of the "responsibility field." Locate on a map present membership and possible future constituents. Study public school locations and, where possible, religious affiliations of pupils. Confer with utility companies and others regarding possible population movements. Study site and location. Recommend the numbers to be planned for in the several age groups.

2. Committee on Worship and the Religious Arts. Study trends and effective programs in Worship and training in Worship. Recommend facilities and arrangements for sanctuary and auxiliary rooms, choir, organ, chapel, children's chapel. Study and recommend glass, decoration, symbolism, color schemes, pictures, woodwork, etc., for entire building. Study exterior church design. Confer with Committee on Christian Education.

3. Committee on Christian Education. See publications of the International Council of Religious Education, 203 N. Wabash Avenue, Chicago 1, Illinois, and denominational agencies. Subdivide for studies of Christian Education for Children, for Youth, for Young Adults, Adult Christian Education, Week-day and Vacation Church Schools. Confer with Committee on Worship and the Religious Arts and with Committee on Fellowship and Recreation, and other Committees as needed. Present list of rooms and equipment required, characteristics of rooms, floor areas, ceiling heights, built-in facilities, etc. (See *The Church School and Parish House Building*, Conover, 1948, \$1.50.)

4. Committee on Fellowship and Recreation. Study policy and plans for social and recreational life of the church to be integrated in the work of Christian Education and Evangelism and the spiritual strengthening of the congregation. Consider moving (and sound) pictures, games, summer and out-door activities, dramatics and pageantry. Confer with denominational and interdenominational workers. List rooms, equipment, floor areas and ceiling heights needed, etc.

5. The Plans and Construction Committee. Investigate and recommend architectural service, and contractors. Study, in conference with architects the materials, mechanical equipment, etc., suitable for church work. As directed by the Executive Committee, the congregation or the official church body, secure and exhibit tentative plans and estimates of cost; have them revised, and secure construction drawings and specifications. Secure erection of the building or any parts thereof. Check closely

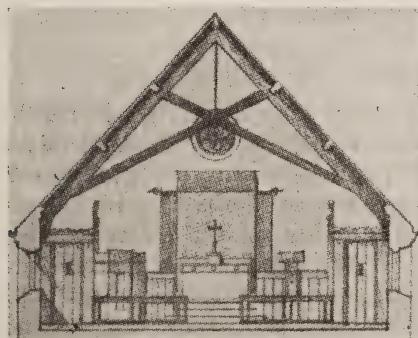
with Finance and Promotion Committee, in addition to the Executive Committee. ONE PERSON authorized to transmit *in writing* all instructions to the architect and through the architect to the builders. Have sub-committee on landscaping.

6. Committee on Finance and Promotion. It may be well to appoint two committees for the work herein described. A FINANCE COMMITTEE and a PROMOTION AND PUBLICITY COMMITTEE, but the two must work in closest cooperation. After careful study and planning, direct campaigns of promotion and fund-raising as authorized by the Executive Committee. Enlist and train workers. See "Church Building Finance" published by the Interdenominational Bureau of Architecture. Prepare publicity material. Arrange for newspaper publicity. Give special attention to religious values in connection with the promotional program. Seek to cultivate a religious interest on the part of the entire church, church school and community. Provide for participation in the building program by having the young people gather rocks for a fireplace, help plan symbolism to be used, etc.

7. Committee on Women's Work. Confer with Committees on Fellowship and Recreation and Christian Education. Recommend program of building and equipment for dining halls and kitchen facilities, parlors, work rooms, etc. Plan for good church housekeeping.

8. Committee on Furnishings and Equipment. Cooperate with the Committees on Worship, Christian Education, and Fellowship and Recreation. Investigate sources of supply, prices, samples, etc., of all furnishings and equipment. Act as purchasing agent for movable equipment. Cooperate closely with the architect. Perform work as assigned by Executive Committee.

9. Committee on Administration and Special Facilities. Seriously consider staff to be employed in the future. Recommend adequate church offices, pastor's conference room, rooms for staff workers, and special items.



A "scissors" truss, an open timber ceiling gives height to the nave with a saving in wall construction

XX

THE FINANCIAL AND PROMOTIONAL PROGRAM

A successful financial and promotional program is surely of fundamental importance in a building program, and must be carefully designed to suit the individual situation.

Some of the steps involved in setting up an adequate promotional and financial plan may be summarized briefly as follows:

1. The congregation must be convinced of the need for new buildings or improvements, and must be led to feel personal responsibility for the project. This affords an excellent opportunity for the pastor to promote the principles of Christian Stewardship.
2. A capable, reliable leader should be appointed to have chief responsibility for organizing and conducting the financial program co-ordinated with the promotional program.
3. A time schedule for the total program should be planned.
4. Special committees are needed to assemble the financial program, and to promote and obtain special gifts, memorials, etc. Where necessary, training classes should be held for these groups.
5. The planning and preparation of promotional and publicity materials is very important to the financial success, and special responsibility should be assigned in this field.
6. Mailing lists must be analyzed and classified carefully.
7. A definite period for intensive fund-raising and publicity efforts should be designated.
8. The follow-up campaign, during which collections are made, must maintain community interest in the project by continued publicity and be integrated into the regular program of the church.

The Promotional and Publicity Program

The promotional and publicity program may begin by developing a conviction throughout the congregation respecting the essential importance of the work of the church. A well planned educational groundwork will be the foundation and sustaining force of the enterprise. It will be conducted in advance of and in conjunction with the financial program. This should include sermons, talks by church school teachers and laymen, as well as carefully planned and prepared printed material, letters and newspaper publicity. The promotional program is designed not only to undergird and advance the financial program but to secure to the congregation the religious reinforcement and spiritual advance for which a church building or improvement enterprise is a means of extra-

ordinary potentiality. The promotional work should be extended to every church school class and group in the church.

The pastor and teachers will find many topics and much Biblical material for the promotional work. We list a very few of many possible fruitful subjects and Biblical passages.

Topics for Sermons and Talks

"The House of God an Essential Center of Kingdom Ministry," "Physical Equipment Essential to Spiritual Ministry," "Our Workshop—Its Chief Output and Its By-Products," "The Church Building as an Expression of Christian Ideals," "The Church Building and Its Reaction on the Life of the Church," "The History and Meaning of Some Christian Symbols," "The Use and Significance of the Various Furnishings of the Sanctuary," "The Church Typical of the Homeland of the Soul," "The Economic Influence of Religion," "The Church a Safeguard to Community Life and Prosperity," "The Church Building the Embodiment of Religious Principles," "Comparison of Public School Facilities and the Equipment Provided for Religious Education," "The Sacrifice of non-Christians for Their Temples," "The Church, Lighthouse, Life-Saving Station, Home of the Church Family, and Center of Worship, Education and Service," "A Strong Local Church Essential to World Evangelism," "A Rendezvous of the Divine Presence," "The Soul's Need of Worship," "Art, the Ally of Religion," "Art in the Promotion and Expression of Religion," "The Church Building and Its Reaction upon the Life of the Individual and the Community."

The example of Nehemiah should provide an effective stimulus. He had a concern for the restoration and vision, made a survey of the conditions (Neh. 2:12-15), organized the forces and resources and brought the people to a mind to build. Other texts of Scripture stressing an obligation to build anew, I Chron. 22:6; 2 Sam. 7:2; Hagg. 1:2-6; Isa. 54:2; I Kings 9:3.

Stereopticon lantern slides are very effective in helping the people visualize the rooms and equipment to be provided in their new building, as do exhibits of photographs.

Photographs illustrating typical rooms in new buildings may be much more effective when printed in financial campaign brochures than plans of the proposed improvement. Sometimes people will spend time in discussing plans while pictures more easily win interest and support of the enterprise.

The Financial Organization

For a church building or improvement program, we suggest the establishment of a financial organization which is much more than just a finance committee. It will include a large number of people who are willing to serve in this organization which will be of major importance in the whole history of the church. They should be led to realize that they are selected because of personal qualities of leadership and devotion.

They should be willing to attend a training class, possibly including a school of stewardship, one night a week for several weeks. A well planned school of stewardship to reach all age groups in the congregation may be needed. The psychology involved and methods of personal approach in arousing interest in the program and raising funds will be discussed at these meetings. Professional church fund-raisers may talk to the group if available.

Visitation of the membership should include visits (and letters) to discuss the general improvement program before the visitation to solicit subscriptions is made.

Raising funds for a church is a far different enterprise from raising money for any other purpose. Group discussions of the best ways to "sell" the building program and clinics should be held. These classes will help to develop a sense of unity among the fund-raisers, also. (See *Church Building Finance*, published by the Interdenominational Bureau of Architecture.)

The pastor will, naturally, play a very important role in the financial and promotional work as well as in the entire building project. It will be his task, frequently, to coordinate the work of different groups and to see that the spiritual import of the building program is made prominent throughout the movement. Much spiritual and physical strength, patience, and wisdom are required. The pastor supposedly is the one who has all these qualities in abundance. It is his task to inspire his people so that they will be eager to make personal sacrifices to carry forward the Lord's work. He will lead the people to pay out money with joy and devotion.

Professional Leadership

Careful consideration should be given the matter of employing outside professional financial leadership. At this point, the denominational leadership can give invaluable counsel. Clearly there is a field for experienced and consecrated financial directors and consultants. The person of a staff of leaders who would be assigned to the church must be considered as to his fitness for the individual church. One firm of directors renders a service of financial guidance by correspondence.

Leadership in church finance is not a matter of mechanical efficiency only, but of personal service growing out of deep religious conviction and the desire to further the work of the church. The employment of professional financial leadership may mean additional thousands of dollars for the project if exactly the right person for the situation is secured and his leadership heartily followed. Every church in the land has a "peculiar situation."

If a professional director is not secured, the church should enlist a volunteer who can give sufficient time to the task of organization and direction. Adequate funds must be provided for the financial organization for such things as printed materials, newspaper advertising, photog-

raphy, etc., to do an adequate work. This would be required anyway if a professional director were employed.

Don't Delay the Financial Program

Do not wait until the details of the building program have been decided upon before organizing the financial program. Formerly, it was considered necessary to have an outline plan and picture of the proposed building to show the people in order to conduct the financial drive. It has been found, however, that money can be raised if the congregation is convinced of the need. Instead of printing specific plans in publicity material, photographs of the kinds of rooms that will be built may be used with possibly greater effectiveness. For, people do not become involved in discussions regarding details of the plans when they should be prayerfully considering their share in the financial program. Most churches can use all of the church building and equipment they can pay for. If any money is left over after the enterprise is completed it can be used to endow the cost of maintaining the organ, the building or added staff workers.

It is desirable to estimate carefully the financial potentialities of the congregation, assuming that they will feel a sense of responsibility for equipping their church to do its work in the most effective manner possible.

Many churches conduct a church building fund campaign for a period of twelve months (or fifty-two weeks). A definite amount is set as the goal for the year's campaign. A well organized campaign is started to reach every individual in the church with an appeal to pledge a certain amount, to be paid each week or month. At the end of the twelve months' program, tentative plans for the building should have progressed far enough to indicate the kind of building and equipment to be provided and to secure a close estimate of the cost of construction.

Then, a second year's campaign can be established, or perhaps the second cycle of the financial program will be for a twenty-five months' period, with pledges paid weekly or monthly. It is generally agreed that pledges should not be for a longer term than thirty-six months.

Memorial Gifts

A special committee should be appointed to manage the memorial and special gift program if such is to be included in the promotional and financial work.

All objects to be offered as memorials should be designed by the architect and approved by the plans and construction committee. This may include windows, furnishings, and other visible equipment. Then a list of these memorials may be published with suggested amounts for each item. Memorial gifts should be solicited and accepted *only* after all participants in the enterprise have made a reasonable pledge to the general building fund. Record the memorials in a special, durable book. Let's



SECOND..... our Social Needs

The people of a church should associate with each other often in a spirit of fellowship in order to sense a feeling of belonging



together. There should be "FAMILY NIGHTS", BANQUETS and CHURCH SUPPERS, FELLOWSHIP HOURS before or after special programs of the church. Forums on timely topics, etc.

The rooms of the church buildings should be open at any time to individuals and to organizations for meetings, parties, work projects, committees, etc.

Our Parish Hall calls for a Fellowship Room where groups up to 200 may be seated at tables where church-wide

Receptions may be

may be shown and

There will also be the Parlor, the Recreation Room and the Hobby Room for smaller groups.



for suppers,
Parties, Teas,
held, where movies
plays presented.

Our Parish Hall would be meeting then a need not only of youth, but of every age group and organization of our church. Organizations of the community, of course, will also be welcome provided they abide by the rules governing the use of the Hall.



A Page from a Financial Promotion Booklet

never again place the names of donors on windows or other memorialized items.

We quote the following from the book "Church Building Finance" (Bureau of Architecture) :

"The Worthy Order of Canvassers"

"Cultivate an atmosphere of importance with regard to the canvassers. Members of the canvassers' staff should be recognized as persons of special ability. Give the canvassers' organization a distinctive name, but avoid anything that may seem frivolous or amateurish. Military terminology in connection with Christian work is questionable.

"The canvassers will receive experience and training that will enrich them personally. They should be selected because of their willingness to be trained, their sincere interest in the Church, and because they effectively represent the Church.

"The canvassers' organization will be an opportunity for the finest kind of human fellowship. The inspirational dinner meetings, opportunities for closer friendship with other members, increased knowledge of the work and problems of the church, and the opportunity for personal growth and achievement, all make membership in the Order of Canvassers eminently desirable."

Training and Directing the Canvassers

"Having selected and enlisted the canvassers, a program of inspiration, training and direction should be started. This program, which is to mean so much to the participants, personally, and to the church, may be inaugurated by an inspirational dinner with a speaker who can stimulate enthusiastic desire for service.

"The canvassers should understand that it is essential for them to attend worship services and a church school class, possibly a class in Christian Stewardship during the Sunday school session. They should visit Sunday school classes, youth meetings, and other activities so that they can represent *the full program of the church*, enthusiastically and intelligently. Theirs is a promotional and a 'selling' job. They must know the inestimable value of what they are to sell.

"The canvassers should meet each week for eight weeks, at the very least, for instruction and conferences. The following notes will indicate something of the scope of their training."

Notes for Canvassers

1. "Be convinced of the absolute necessity of the Church and all its work. Make your own notes regarding this from your reading and from sermons and addresses.

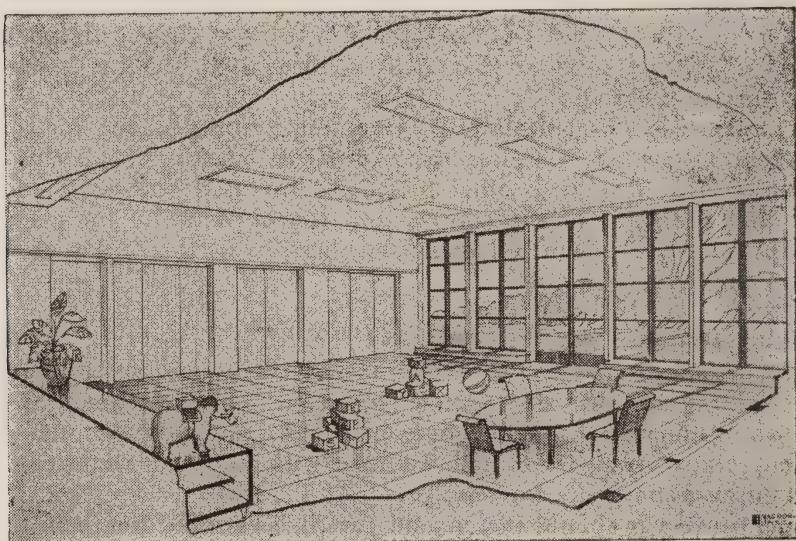
2. "Become convinced regarding the principles of Christian Stewardship.

3. "Think through your experience of the Church and of the Christian religion and recall events or circumstances to make you everlastingly

grateful to Almighty God and our Lord Jesus Christ, so that you are eager to do some deed expressive of your gratitude and sense of loyalty. If it is not too intimate you may have occasion to refer to such an experience in the course of your canvassing.

4. "Plan to keep the days set for the canvassing free of other engagements. Plan to make your service a clean-cut job, finished on time. As a minimum, read every piece of literature that will be distributed to the members of the congregation.

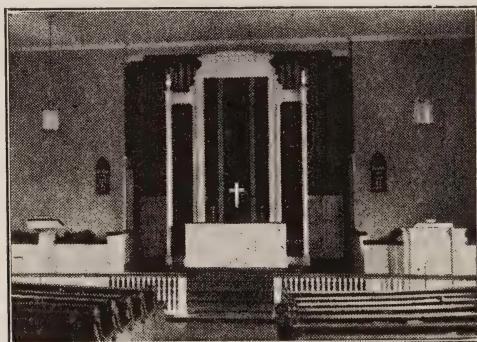
5. "Talk things over with the other canvassers whenever possible. This will strengthen your own conviction about the program."



Magoon and Salo, Architects

Architect's sketch of Kindergarten used in Financial Promotion

Methodist Church, McConnellsburg, Ohio. Remodeled Chancel



Wenner & Fink, Architects

XXI

THE TIME SCHEDULE FOR A BUILDING PROGRAM

Few people realize, until after they have had extensive experience in a church building or improvement enterprise, that a great amount of time is required for program and building planning before any actual construction can be started. It is of the greatest importance to understand this. Quite often, the congregation loses interest in the project because the people have not been fully instructed respecting the entire program and if the building is not erected within a few months after the enterprise has been inaugurated.

A time schedule is important for the pastor and all others concerned with the leadership and committee work of the program. This acts as a record of progress and helps to keep the work moving. It is wise to explain to the congregation why months and sometimes years of preliminary work are essential before laying the foundation of the building.

The following outline is offered as a suggestive guide in setting up a time schedule. Each individual project must of course have its own schedule prepared in keeping with the local circumstances. The suggested schedule covers a period of three and a half years from the time the program is started until the new building, or units of it, are occupied.

First Year

The first six months—This is the period for promotion of the advance program within the congregation. The need for a recreational program, a nursery department, or weekday church school for example must be presented so convincingly that the people will realize the necessity for the project if the work of the church is to succeed. The several organizations and groups in the church may present their needs for improved or additional facilities.

Seventh and eighth months—When congregational support warrants it, the Survey Committee may be appointed, and a comprehensive survey of the community and population trends should be made. A religious census should be taken.

If a new church is being planned, careful consideration should be given to the most suitable site, in relation to such matters as residential neighborhoods and transportation facilities.

Ninth to twelfth months—Organize committees to study various aspects of the problem in the light of survey findings. It is advantageous to have the widest possible representation on these committees.

Although the promotional program will be most intensive during

the first six months of this year, popular interest can be sustained only by frequent reports on findings and progress. Many of the regular activities of the church can be related to the building program so that it will be carried forward with the ongoing work of the church.

Second Year

First month—A detailed statement should be compiled, including the number, types and size of rooms and equipment needed to carry out a successful church program. This information should be presented to church members in an interesting manner, using pictures, small scale models and other means.

Second month—Conferences on finance and instruction of the finance organization. School of Stewardship.

Third month—Intensive promotion in preparation for the financial campaign.

Fourth month—Conduct a well-organized financial campaign and plan the collection program.

Fifth and sixth months—The building program presented to the architect who begins tentative outline plans. Continue personal promotion of the program and announce progress in the financial and planning program from time to time.

Seventh month—The architect displays the first tentative plans for review and for further instruction.

Ninth month—The second set of outline floor plans is discussed with further instructions to the architect.

Eleventh month—Exhibit of the further outline floor plans and the first studies of the architect's exterior designs.

Third Year

First month—Careful follow-up of collections and extension of the financial campaign to new members and friends.

Second and third months—Consideration of costs and preparation to approve the architect's outline plans and exterior design, provided rather rapid progress has been possible.

Fourth month—Authorize the architect to complete the working drawings, engineering drawings and specifications as required for constructing the building or sections of the master plan to be erected first.

Seventh month—Approve the final working drawing and specifications and invite selected contractors to submit bids for erecting the building or any sections thereof.

Continuous Promotional Work

Eighth month—Study with the architect and revise contractor's bids; check on sub-contractors and their bids.

Ninth month—As advised by the architect, sign contract for the construction of the building or that part of the total building plan that can adequately and safely be financed at this time.

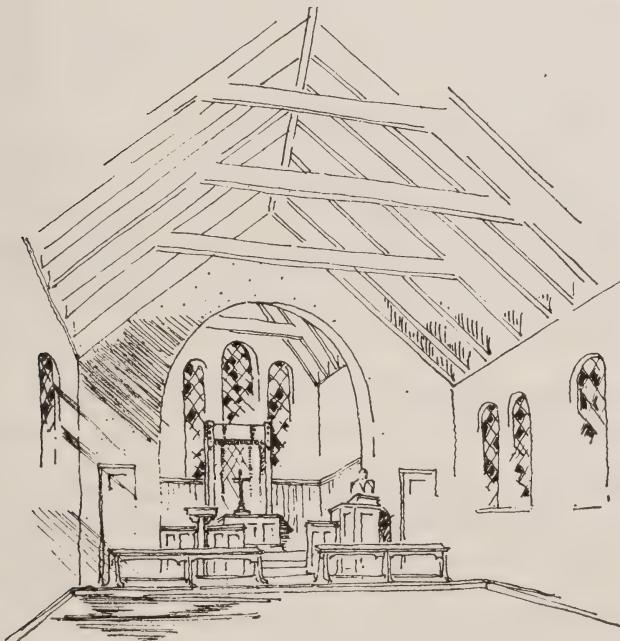
Fourth Year

Sixth month—If rapid construction has been possible, dedicate to the service of God and humanity the building or unit that has been erected.

This suggested schedule may not meet the needs of any church other than the one for which it was designed. It may help to indicate many items included in a church building program, and that provision should be made on the time schedule for each item. Many important details of the program have not been indicated here. If any part of the program is overlooked or neglected, the whole enterprise will be hampered and spiritual value lost.

There will be continuous activity in certain departments of the enterprise throughout the entire schedule. A continued publicity and promotional program should reach every church school pupil as well as everyone in the community. New members who wish to participate in the advance movement because of the increased religious values it will give their families and themselves will be received; workers trained to direct the new or extended program made possible by the improved facilities.

When the building project has been completed a special celebration should be held, during which, recognition will be given those who worked in any way in the planning and construction of the building.



A sketch of interior for small church showing a churchly chancel, exposed roof timbers lending a dignity and feeling of strength in a small building.

XXII

THE BUILDING PROGRAM

The building program is a complete list of all the needs and requirements stated so the architect will know exactly what is required.

After the population studies have been completed and an estimate made of the various age groups in the potential constituency of the church, a statement of the religious, educational and other organizations desired, and the program for recreational and social activities has been assembled, and it has been decided whether to have a chapel and what groups shall use it, whether boys and girls are cruelly to be separated in classes and numerous (or almost innumerable) similar questions have been settled, then the building program may be written.

THE ARCHITECT IS NOT TO BE EXPECTED TO MAKE THE DECISIONS INVOLVED IN ASSEMBLING THE BUILDING PROGRAM.

The policy and program of the church are to be determined by the church itself with the aid of such consulting service as it decides to employ.

The building program outlined which follows was assembled by one church after the several committees and sub-committees had spent two years in studying their field and assembling their statement of proposed church work and the requirements for housing it.

If another church should use this as a guide every single item must be reviewed with respect to its particular field and need. No building program will be the best solution for two different problems.

In this case the architect had not, on his own complete responsibility, erected a church of the size here needed. It seemed therefore especially important to the church and the consultant to assemble the building program rather completely.

The Building Program for St. John's Church

To be located on the plot described by the accompanying plot plan and subsoil survey.

The architect's *first* over-all scheme or master outline plan is to show the following facilities without limitation as to the possible cost of the building and without special attention to the exterior design.

Use the A.I.A. plan chart for calculating cubic contents and report the same for the major sections of the plan. The architect is to report, in so far as he may be able to estimate, the apparent cost and material situation as it may possibly be six months from the time his first plans are presented for the entire scheme and for the several sections of the

building outlined. He should also record any special foundation costs that may be anticipated in addition to the average cubic foot cost.

When the church gives its instructions for revised preliminary plans, the probable amount to be appropriated for the entire building or first section to be erected must be stated to the architect. This must be itemized as to general contract cost, allowance for glass, built-in furnishings such as pews and chancel furnishings, etc. Architect's fees are to be included in the cost.

After estimates of cost have been presented, following the second presentation of outline plans, the church agrees that the architect will be given definite instructions in regard to the amount of money that is likely to be available for the building and its equipment and furnishings or for any unit part to be erected.

To help him familiarize himself with the requirements, the architect may note that the following manuals and books had been studied during the process of assembling the statement of needs. He may wish to refer to these authorities and to others of his own choice: *The Church School and Parish House Building*; *The Church Building Guide*; *Building for Worship*; *Planning Church Buildings*; *The Church and Recreation*. Leaflet literature will also be supplied by the consultant.

With the second set of revised outline plans the architect will bring recommendations regarding equipment such as heating, air conditioning, ventilation, interior decoration and the available information regarding costs of these facilities.

Exterior Design

The congregation desires the building to appear churchly, distinctive, attractive, without ostentation. It need not necessarily follow slavishly any traditional style of architecture but must be easily recognizable as a church. The architect will study and recommend the orientation in keeping with his findings as to surroundings, main approaches, possible visibility of the building from several points of observation.

There is to be no basement under the nave; the chancel is to be located at the end of the nave opposite the church school and social rooms, with a central entrance and narthex for the entire plant.

In keeping with the city ordinance, parking space for 100 cars must be provided on the plot.

The architect is to nominate a landscape architect; the church agrees to provide, in addition to the architect's fee, the sum of \$500 to compensate the landscape architect for his counsel and plans.

Rooms Required for School Work

I—Children's Divisions

1. A nursery for children under 1½ years, 250 square feet for ten children and nurse.

2. A nursery room for "toddlers," 1½-2½ years of age, about 300 square feet for 15 children and two workers.

3. A nursery class room for $2\frac{1}{2}$ and 3 year old children, about 400 square feet for 20 children, teacher and helper.
4. A lavatory with space for bathinette; juvenile size fixtures, adjacent to the above rooms. Hot and cold water. Cupboard.
5. A class room for four year old children, about 320 square feet for 16 children, one teacher and helper.
6. Class room for 5 year old children, 360 square feet for 16 to 18 children, two teachers.
7. A lavatory with juvenile size fixtures to be easily accessible to rooms 5 and 6.
8. Coat hanging space immediately adjacent to the above rooms where attendants can help the children with wraps. All above rooms on main floor. Entrance to this section at grade.
9. Ceilings to be 8 feet in height, liberal area of clear glass in windows with modest colorful "incidentals" inserted in rooms 5 and 6. French doors to outside grade, for above items 2, 3, 5 and 6. Decorations to be cheerful, quieting. Storage closet with shelves for each of the above rooms. Tack boards and picture rails with groove in the rooms for 4 and 5 year old children. Tack boards to extend two feet above the picture rail which is to form the base of the tack board, center of tack board to be at average eye level of the children. Closet space with low shelves for light rugs.
- Final details to be supplied when working drawings are authorized by committee on religious education of children through the executive committee member who is instructed to communicate all instructions in writing to the architect.
10. Plan six class rooms for children 6, 7, 8, 9, 10 and 11 years of age, these to vary in size, allowing about not less than 12 square feet per person for from 15 to 18 pupils and one teacher in each room.
11. Coat room space for pupils of above (item 10) rooms; boys' and girls' lavatories within easy reach but not necessarily adjacent to this group of rooms.
12. A built-in-chalk board about 3 or 4 feet in size, of selected color in each of the above six rooms, shutters to be used as tack boards on both sides provided for each.
13. A closet in each room for teacher's wraps and supplies.
14. Clear glass windows with small colored or outline incidentals.
15. A children's chapel, seating capacity 60 children besides space for 12 in a choir. (To be used as scheduled for groups noted at 10.) Provide for a worship center, leader's desk at one side of platform. Space for piano. Windows of tinted glass in junior chapel with a stained-glass medallion in each; subjects to be supplied by committee of teachers.
- Provide for showing of sound pictures in this room. (This room will be used twice each Sunday by two or three grades grouped together and occasionally used by single grades according to schedule.) (Portable blackboards.)
16. Plan one room each for young people 12, 13 and 14 years of age.

Provide in these rooms 10 square feet per person and for 16 to 18 pupils and one teacher each. Small individual tables to be used and teacher's desk.

Blackboard and window treatment as indicated in above items 12 and 14. These groups will assemble singly or two grades together as occasion may require in the church chapel. For weekday activities the church parlor, the youth rooms and the fellowship hall and game rooms will be available.

17. A youth room, 500 square feet with fireplace at one end and worship center at the other. Kitchenette adjacent; built-in bookcases, closet. This room to be scheduled at Sunday school period for assembly for seniors, 15, 16 and 17 years old and also at another period for young people's assembly when required.

18. Five class rooms varying in size from 140 to 160 square feet each to be available for senior and youth groups taking elective courses. (Tablet arm chairs to be used.) May be on second floor.

II—Provisions for Adult Religious Education

19. Fellowship hall to be used by largest adult group; church parlor and boys' and girls' club rooms and the room for floor and table games and the stage in the fellowship hall to be assigned to adult groups. In addition, have three adult class rooms, about 250 square feet each for an attendance of about 30 each. One of these on main floor with adjacent storage closet for 10 sewing machines; 5 base board electric outlets. For further details as to church school building, see the book: *The Church School and Parish House Building*. (1948)

III—The Sanctuary

20. Provide in the nave 300 sittings allowing 20 inches each, one center aisle, two side aisles, pews 34 inches back to back. No balcony. A room above the narthex may have removable panels to provide overflow seating. Wall construction to permit possible future addition of transepts.

Provide in the chancel for a choir of 40 seats 22 inches each. (The nave is to be used for two services on Sunday morning.) Provide communicants' railing. For further details regarding the nave and auxiliary rooms to the nave see booklet "Building for Worship." Note pictures on pages 3, 9, 13 and 51.

21. In addition to the above indicated junior chapel (15) provide a church chapel seating 60 persons, choir seats for 8, communion table and communion rail and lectern. Have an alcove for seating the family for funeral services, same room shut off by panels to be used as bride's room for weddings. Have means of traffic outside the chapel from bride's room to the narthex of the chapel. The chapel to be easily accessible from the sidewalk on the St. John's Street side of the plant and also easily accessible to church parlor and church school rooms.

22. (The chapel is not to be assigned to any church school class but will be available for use by various groups particularly those of high school and junior high age).

NOTE—the chapel will need to be heated throughout the daytime and

usually in the evenings to be comfortable for private meditation and prayer. The Junior chapel to be heated on Saturdays and at other times as scheduled.

IV—For Fellowship and Recreation

23. Provide general purpose fellowship hall with an unobstructed floor area 42 x 70 feet. Have stage with a proscenium opening 26 feet wide if possible; no partitions at the ends of the stage; depth of the stage 20 feet. Height of opening 14 feet. Straight front; no footlights. Trap door 2 x 12 feet in floor of stage at rear. Net to be rolled in front of stage.

Ceiling height of the fellowship hall to be 18 feet.

24. Kitchen with serving room space and counter between the serving and the kitchen working space. Place kitchen at end of the hall opposite the stage, 9-foot ceiling in the kitchen with room above which may be the youth parlor above mentioned with removable panels so that this room may be used for overflow for fellowship hall audiences and also for placing moving picture equipment.

25. The church parlor: 800 square feet of floor space, fireplace to be constructed of rocks to be gathered by youth or boys and girls of the church; kitchenette available unless the parlor can conveniently be located adjacent to the main church kitchen. Built-in book shelves.

26. Install three bowling alleys. Provide a room large enough for two ping-pong tables and two shuffleboard courts. The ceiling may be 9 or 10 feet high. This room doing double duty as an adult class room and small dining room. Sound proof the bowling alley space.

27. Provide boys' club meeting room with 4 storage closets equipped with drawers and shelves, floor space of room 500 square feet; of closets 20 square feet. (Some class rooms may be used as troop cabins, main boys' room to be available for adult class on Sundays.)

28. Have fireplace (in 27) built of rocks to be gathered by the boys.

29. *NOTE*, above indicated youth room (17) to do double duty for girls' club work. Built-in closets for these groups as requested by the recreational committee.

30. *NOTE*, the recreational unit of the plant may be a two-story unit with the ground floor excavated 4 feet below grade and on this lower floor, bowling alleys, game rooms, club room and very liberal provision for lavatories and storage; the fellowship hall on the main floor. Craft shop under the stage, used also for adult group on Sunday. 9-foot ceiling for the lower floor. See suggestive sketches of other churches provided by the church building consultant.

31. Provide refreshment booth, easily accessible to the above suggested game rooms and also accessible to the fellowship hall.

V—Administration

32. General church office for church secretary; space for desks for secretary, church school superintendent and secretary. Located to control main entrance to the building. A counter between the working space and the public space.

A work room adjacent for four filing cabinets, shelves for supplies, addressograph equipment, mimeograph and safe.

33. On the second floor provide pastor's conference room with fireplace, lavatory, clothes closet, built-in book shelves, minimum clear floor area 240 square feet (outside of shelves).

34. Study for minister of education. Closet, bookshelves. Minimum floor area 120-160 square feet.

35. Provide another similar room for possible future additional staff worker.

36. Library and reading room. About 320 square feet. Book shelves; storage closets for maps, pictures, phonograph records. Room must be soundproof.

VI—The Choir

37. The choir assembly room to be used also as studio for the minister of music.

Two robing rooms—one for men and boys and one for women and girls—should have opening off the choir room and should be large enough to accommodate 30 persons. Choir room to have minimum clear floor space of 480 square feet. Ceiling to be treated acoustically so that choir may sing at full volume. Room to be located so the choir can enter the nave from the narthex.

38. Give very special attention to treatment of the narthex which is the central lobby for the entire plant, as well as being a common visiting area after the main church services. The main church parlor above noted may open off the narthex.

39. Provide adequate coat hanging space for those who attend church in the nave and who use the chapels as well as for all in the church school rooms and fellowship hall.

40. Attractively framed bulletin board in narthex.

41. A moderate appropriation will be provided for stained-glass windows in the sanctuary and chapels. It may be necessary to use a tinted glass temporarily for some of the window openings when the building is erected. Rose windows in the chancels of both nave and chapel to cost about \$25.00 per square foot have been provided for. Clear glass windows with carefully designed incidentals and color in church school and rooms other than nave and chapel. Sills of all windows of children's rooms to be below eye level of the child. Decorative metal grilles inside the windows of the fellowship hall—these to be closed when the room is used for athletics.

42. Color schemes to be shown for all rooms.

43. Show samples of colorful tiles, with acoustical value for interior of corridors, fellowship hall and other rooms.

44. Floorings—Asphalt tile to cover all basement floors. Provide samples of colorful, quiet and resilient floor coverings for other rooms. Show illustrations of inlaid features for floor games, etc. Carpet to be used in church parlor and chapel and possibly in other parts of the building.

45. Entrances—The main entrance to the plant shall be entered at the narthex by climbing only one step not more than 4 inches high. One section of the step, a ramp for use of wheel chairs.

46. For many details regarding the various parts of the building, including suggestions for organ, stage, etc., refer to data in books and leaflets supplied by the consultant, and after approval by the committee.

47. Mechanical equipment—to be recommended by architect and his engineer (including some type air conditioning or air cooling or forced ventilation.) No signal systems or buzzers except as stipulated and approved by the pastor. Instructions will be given for installing cable for picture, sound and television equipment. Space for public 'phone booth. Workshop for janitor, with storage closet.

48. Organ—A pipe organ will be installed—see statement of organ consultant as to space required, composition of walls, of the chambers, etc., to be provided by the committee on worship and arts. Portable pipe organ in Chapel.



**Historical Room, Presby-
terian Church, Coates-
ville, Pa.**

XXIII

ARCHITECTURAL SERVICE FOR THE CHURCH

The leader of a church building or remodeling program should insist upon the employment of the very best available architectural service. Failure to do so may mean failure of the enterprise and hamper the work of the church for generations.

It is important to know just what the work of the architect includes. The following, in brief form, is a description of the architect's task. The smallest building projects should receive this full service, rendered by an architect licensed to practice in the state in which the project is located.

A Brief Definition of the Architectural Service

Division I. Preliminary Drawings and Sketches.

Several plans and exterior designs showing various solutions of the problem; these to be revised or modified until a satisfactory plan and exterior design have been approved and estimates of the cost secured. Specially prepared publicity drawings may be provided for the financial campaign. Then a final set of complete preliminary plans should be drawn to a scale of $\frac{1}{8}$ " to the foot.

At this stage, a total of 20 to 25 per cent of the architect's fee, based on estimated cost of all the building represented by the preliminary plans, is due. (A part of this fee may have been paid at the signing of the contract with the architect.)

Division II. Construction or Working Drawings.

For a church building, this section often requires twenty-five to forty sheets of drawings from which blueprints must be made. Engineering plans for heating, wiring, plumbing, etc., are included.

These should not be ordered until the work in Division I has been satisfactorily completed, the preliminary drawings reviewed by consultants, and estimates of cost agreed upon.

Division III. Specifications, Contract Documents.

Specifications should be thorough and complete, leaving nothing to the imagination of the contractor, or to be added later as "extras." Preparation of specifications involves the examination and knowledge of hundreds of building materials most suitable and available when wanted and also knowledge of the best methods of construction.

At this stage, a total of 60 to 70 per cent of the architect's fee should promptly be paid.

Division IV. Further Detailed Drawings.

Certain parts of the building, woodwork, stonework, windows, stairways, wall sections, and assembled parts, must be described fully by large-scale detailed drawings. Unless expert service is rendered in this division, the building will be commonplace and others will have to be paid to provide necessary details. An additional amount may be paid for special full-size plans of symbols, carved work, etc., by the church or by the craftsmen.

Division V. Architectural Supervision.

This includes inspecting contract forms, letting contracts, regular inspection of construction, the materials, and the work of sub-contractors, auditing accounts, approving monthly payments due contractors and others. This service is quite essential to the successful outcome of the building program.

Usually, the architect's fee is divided into five payments corresponding to the above divisions. This will vary, however, according to the practice in different offices or sections of the country. For example, the fee for engineering service may be itemized separately from the architect's principal fee.

The Place of the Consulting Architect in Church Work

So varied and complex has building construction become that there are specialists in architectural practice as in the other professions. An architect who is engaged in a successful practice of designing homes or commercial buildings may not understand, without a great deal of research, the requirements of the church program and the necessary elements of the difficult task of church design and planning.

Church building is the most complex and arduous of all architectural problems. Within one structure there must be a sanctuary for divine worship, a school building, and social, recreational and administrative facilities. These are, from a design and construction standpoint, quite different buildings, but it is necessary to have these different types of buildings planned as one harmonious structure, a unity, for successful church work. This is a problem of special complexity for any architect to solve.

The consulting architect has a very important place in the church field, especially where it seems necessary to employ also an architect whose work has not been especially limited to church buildings. The consulting architect usually performs all the service outlined in Division I of the Definition of Architectural Service. Or, he may do all the work except that in Division V. The fee is divided between the two architects in accordance with the proportion of the work done.

The consulting architect should personally visit the field, and meet with the building council and its advisers. He will then prepare preliminary sketches which, after revision, will be the basis for the associated architect's work.

There may be a lapse of time between the work of the consulting

architect and that of the associated architect, during the promotional and financial program. When the financial resources warrant it, the associated architect then proceeds with the preparation of the construction drawings and specifications, securing bids and, as instructed by the committee, letting contracts, with conferences with the consulting architect as desired and needful.

Selecting the Architect

Architecture is one of the highly specialized professions. The competent architect must have technical skill and knowledge, business and executive ability, and artistic feeling with a background of general scholarship. He has taken courses in liberal arts, literature and history as well as technical training in business administration, design, architecture, engineering and purchasing. In addition to all this, the designer of the House of God must have a deep religious conviction. The church differs in its function both as to its floor plan and exterior design from every other building and requires a different approach and a different viewpoint. The architect of a church must have more than purely architectural qualifications. He should also be a good churchman. The "architect" of course may include a firm or group of persons, each especially competent in one or more divisions of the architectural total task.

Most states require the examination and registration of architects, making it illegal to use the term "architect" without such legal registration. Avoid plans supplied by lumber mills or contractors, as you would doubtful patent medicines for a serious illness. If plans are not signed with the word "Registered Architect" ask if the one who drew them is really an architect. "Designer" written on a plan usually means that the guilty person is not really an architect licensed to offer responsibly the services of an architect.

Do not expect the best architects to come soliciting your work. The very architect you need may never solicit. He may take the same attitude that the doctor or lawyer does toward soliciting work. Do not employ the architect on the basis of pleasing pictures he may present. Anyone may hire a good artist to draw sketches that will please the committee, or the "influential" gentlemen or ladies on the committee.

Employ the architect just as you would other expert professional service—upon his ability and record of accomplishment, and his sincere interest in the work of the church.

The worst possible way to select an architect is to invite several to present sketches. Then the best salesman, with the prettiest pictures and rashest claims as to the cost of his buildings, may win the commission. During busy times this danger is not as prevalent as when there is a slump in the building industry. It is as unreasonable to ask an architect to prepare free sketches as it is to ask a lawyer or doctor to present a free opinion, which you will use or not as you choose. Do not expect satisfactory results from such a procedure. (There is, however, an approved competitive method in which architects are invited to submit

tentative plans for which they will be paid, the best solution being determined by a jury.)

The Architect's Fee

Expect to pay the architect a fair fee. His fee must cover a wide range and variety of expenses. Besides compensating the architect for his knowledge and services of a varied nature, out of his fee he must pay his draftsmen and engineers, the majority of whom are college and university trained. He must employ an office force and pay rent, and the cost of supplies, blueprinting plans after they are drawn, typing or printing specifications, etc., etc.

No matter how completely the statement of needs has been prepared by the church and consultant, the architect will need to examine and note the results of the use in church building of hundreds of materials and pieces of equipment. He must enter into the whole world of religious art and be able to give the church adequate and completely satisfactory guidance in the matter of glass and mechanical equipment such as heating, ventilating, etc., *suitable for church work*, the requirements of which are very different from that of any other type of building. We trust the architect to know about the laws of sound, so that each room in the building will have the proper acoustical conditions in keeping with the purpose of the room. The same must be true respecting many other matters requiring technical knowledge and skill.

The minimum fee a church should expect to spend for complete architectural service is 7 to 8 per cent, or more, of the cost of the building and any furnishings and equipment selected with the architect's advice. For remodeling, a higher fee should be paid than that for new construction. A comparison of this fee with the cost of other expert and professional services, in consideration of what the charge really covers besides the time and knowledge of the architect himself, will show it to be very reasonable. The fee for church work should be more than the standard rate paid for commercial work which costs the architect less to execute. It costs an architect much more to serve a church than a commercial enterprise involving a building of equal cost. More time is consumed with committee meetings and consultation with the pastor or other interested church members. In a commercial building several floor plans may be duplicated, but in a church nearly every room requires individual study, as does every side elevation of the building.

The contract with the architect should indicate whether the fee covers the cost of engineering work and drawings for heating, air conditioning, lighting, etc. The cost of travel may be in addition to the fee. So may large scale drawings of chancel furniture, etc.

Never consider the architect's fee as something additional to the regular cost of building. It is an integral part of, and an essential part of the cost of the building. Of course the architect is paid for his work, regardless of whether the building which he planned is ever erected. It may seem strange to take the time to state and print such an obvious

fact, but there still are even church officials who think of "buying blueprints" as their relationship with the architect. The blueprints and specifications are merely the final representation of a vast amount of study, counsel, and highly skilled and legally responsible professional service by the architect and his staff associates.

The contract with the architect should provide for possible discontinuance or postponement of his services if necessary at certain logical stages in the process of the architectural work.

Omission of any part of the architect's work will result in expensive loss of time in construction and waste. The architect's knowledge of materials, their availability and cost all over the country may, alone, result in greater savings than the amount of his fee.

The American Institute of Architects with headquarters at 1741 New York Avenue, N. W., Washington 6, D. C., which is the professional organization of architects in the United States, provides an approved contract form and several other printed forms.

The architectural profession through the American Institute of Architects maintains a rigid code of ethical practice which is designed also to protect the owner from costly and unpleasant experiences with incompetent persons who attempt to do the work of an architect. There are, perhaps, good architects who do not want to belong to their professional organization. However, ask the architect whom you are considering, not only about his legal license to practice in your state, but whether he is a member of the A.I.A., or of the authorized local or state architectural organization.

The architect must not have a financial interest in the manufacture of any building material or equipment.

He should not be in the employ of a builder.

He should be engaged solely in the interest of his client, the owner of the building to be planned.

Churches have foolishly dealt directly with manufacturers or contractors, thinking thereby to "save the architect's fee." Not only is an architect's fee included in the cost in these instances, but the architect or alleged architect works in the interest of the manufacturer who employs him and the work is removed from competition with other producers.

The architect must be given sufficient time, without interruptions, to develop and revise his plans—thereby saving money for the church and securing the best results. Every church building problem must be studied individually—no two problems are alike.

Authorize ONE PERSON to inform the architect, *in writing*, of all decisions. Allow an architect to begin work only after an approved contract form has been executed.

Architectural Service for Small Churches

Admittedly, it is a difficult problem to supply complete architectural service for small and isolated churches. But the lack of such service has

resulted in more money being spent by denominational boards to deal with bad church debt problems than would have been required to provide adequate consultation and architectural service in the first place, besides securing for these churches suitable and more adequate buildings.

In many of these "financial problem churches" more money was wasted on an unsuitable structure than the amount of the debt the denominational boards were later called upon to deal with in order to "save the situation." In some cases the amount of the debt would have paid for a better building.

Efforts have been made to supply stock plans to small churches, without providing architectural supervision. This system has many pit-falls. A church board in one state employed an architect at cut-rate fees to prepare plans for certain projects. Then the board sold blueprint copies of these plans to more distant churches in a commendable effort to "get them some kind of architectural service." One of these plans prepared for a level site was sent to a church to be built on a hill top where it should have been built right at the ground level. But it was built according to the plan and to enter the sacred edifice one climbs not only the hill but four feet of steps in addition after he gets up the hill. The cost of the four feet of wall clear round the building would have paid for the needed architectural service designed for this particular problem including the supervision.

Some denominational boards now require that a part of their financial aid for churches shall be used to pay for adequate architectural service.

We must emphasize the fact that the cost of architectural service is one item in the regular cost of constructing any building that must not be excluded or skimped.

Efforts are being made to assist smaller churches with outline plans prepared for possibly similar situations. But for even the smallest church it is hardly ever possible to use a set of plans and specifications of materials and methods of construction for a situation other than the one for which they were prepared.

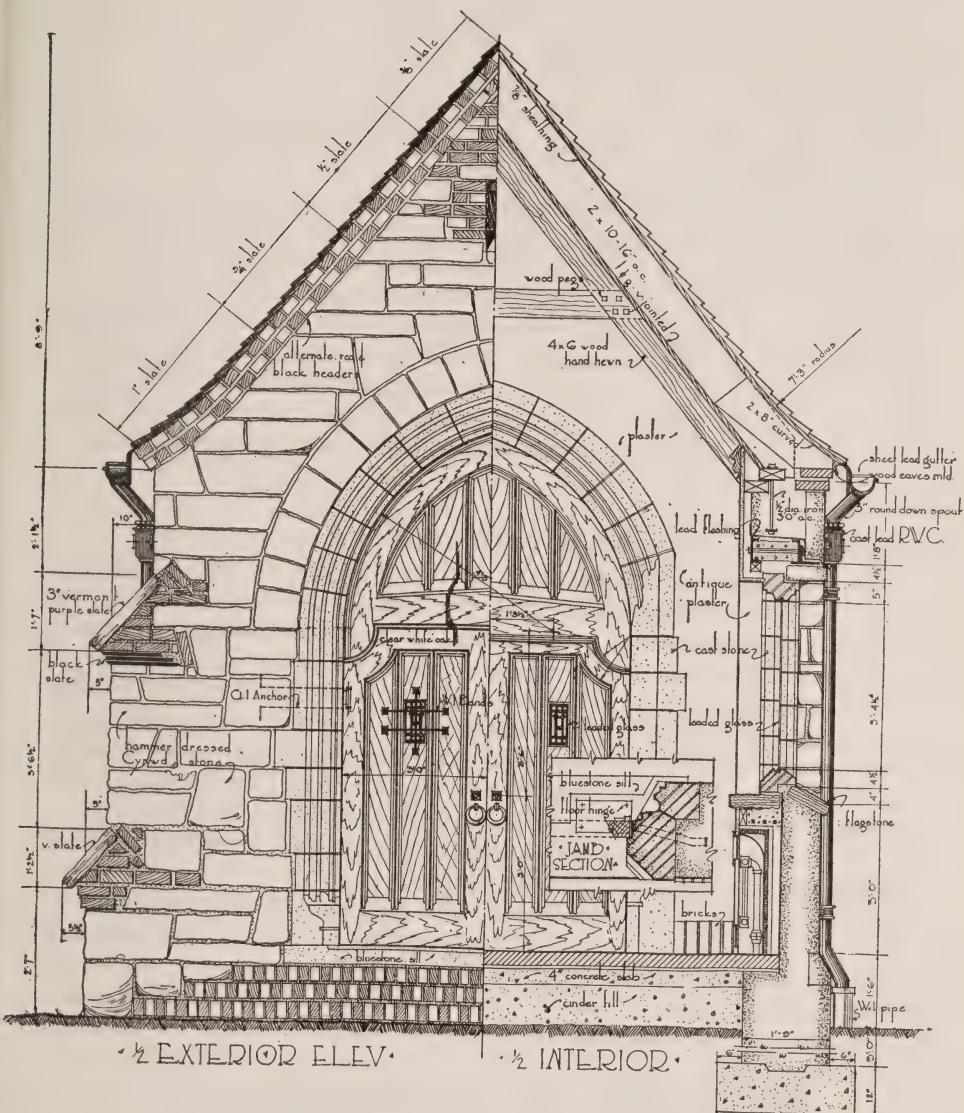
The Building Contractor

We might assemble the best possible building program, have the finest architectural service and have all the money needed, but unless the builder, the mechanics, craftsmen and workmen are efficient and reliable, our church cannot be built as we want it.

The selection of the building contractor is indeed a matter of supreme importance. His work is of a complex nature. He must see that many individuals who differ widely in character, interest and qualifications work together as a united team. He must see that expensive equipment and materials are used with the greatest skill and efficiency. He must have adequate financial resources, technical knowledge and exceptional, organizational and executive ability if he is to secure the satisfactory construction of a church.

The contractor who offers the lowest bid for erecting the building

Working Drawing of a Doorway



Sundt, Wenner & Fink, Architects

One may see here just a hint of the tremendous volume of work an architect must do to plan a complete building. This is the construction plan of only one doorway and is accompanied with specifications for each detail of the material and the methods of construction to be observed, so that nothing needed will be omitted and the contractor knows what is to be done and can tell in advance exactly what the building will cost.

may not be the one who should be selected. It is well, however, so to assemble, with the aid of the architect, the requirements and qualifications which contractors are to meet in order to be invited to bid for the work that the lowest bidder will be awarded the contract. These requirements will include his financial situation; his record of accomplishment on other projects; his record in dealing with workmen and sub-contractors for the heating, plumbing, wiring, and other special work; his general personality and interest in church work.

In every case the church must be protected by a performance bond or other form of insurance to guarantee that the work will be completed as specified and within a certain time, and that the church will be protected against all legal difficulties because of failure of sub-contractors or claims on their part or claims by dealers or manufacturers of materials. Sometimes the contractor is appointed upon the basis of his qualifications when the architect is engaged, so architect and builder can have the advantage of mutual co-operation during the planning and the time selecting the materials, and mechanical equipment, estimating the costs, etc.

Can we do without the general contractor?

This question is often raised by church committees who think that much can be saved on the cost of the building if they eliminate the contractor. Before deciding upon such a procedure, which is usually most inadvisable, the following questions need to be considered:

1. Who will guarantee that the building, as specified, will be erected for a certain cost? And at a certain time? How can the congregation be protected against possible rising costs resulting from many contingencies?
2. Who will care for the arrangements and cost for liability insurance, insurance against theft or damage of materials, during construction?
3. Just who will award subcontracts and see that they are fulfilled without loss of time in the whole enterprise?
4. Who will investigate costs and make purchases of all materials?
5. Where will the heavy mechanical equipment and power tools that might be supplied by the general contractor be secured?

The conditions that obtain in some allegedly successful project where the contractor was eliminated may not be present in another situation.



XXIV

CONFIDENTIAL TO THE ARCHITECT

During the past twenty-five years the writer has enjoyed the confidence and fellowship of many excellent architects who were deeply interested in religion and in the work of the church. However, many architects lose interest in working with church groups because of lack of effective co-operation on the part of the "owner" (the church board). They are expected to be mind readers, and to know all the needs of the local church without being told.

Such information as the number expected to use various rooms, whether the groups will be boys, girls, or mixed, and the main function of each room, is essential to the architect.

Too often, the architect is invited to church meetings where he is bombarded with irrelevant questions and instructions, criticized for his "large" fee, and forced to listen to arguments between the church people present on various features of the building program.

Before the church decides on the floor plan, some trustee will persist in discussing the pitch of the roof or the type of heating. Brother architect goes home with a headache, manages to remain cheerful the next day when a committee comes, unannounced, to talk about the kitchen, not waiting to give their instructions in writing through the planning committee.

However, church architecture has its many rewards. Increasingly, the entire community is coming to recognize the importance of the all too modest architect. Articles describing new church buildings are now even occasionally naming the architect who created the edifice along with that of the bishop who only dedicates it or the visiting parson who offers a prayer at the service.

To the many architects who are interested in our American church building enterprise, we offer some suggestions:

Don't be lured into giving free advice to church board meetings before a contract has been signed.

Don't become involved in a "free for all" church board meeting.

Don't draw a line until the church has given a complete statement of needs, in writing, approved by those authorized to do so.

Take instructions only from the official church building committee and in writing. The pastor may not have been authorized to present his personal ideas as the approved program of the church.

Don't present free sketches and employ salesmen's methods to obtain the contract. Don't cut fees by promising a "donation." Make a gift to that church if you wish. But that is another matter.

Don't compromise the splendid ethical principles of the profession. Don't offer cut-rate fees. Church building committees and leaders are beginning to recognize the value of competent professional service. But the architectural profession must do more than formerly to inform the public of the necessity of professional guidance in their field. Ask the lawyer or doctor on the board whether he gets paid unless he wins his case—or cures the patient.

If you have been appointed architect and the signed contract or plot survey plan has not arrived, call up the pastor. Perhaps a committee chairman has gone to a convention or something.

One church building program was delayed for months because the committee did not secure a statement of zoning requirements from the city, although they had owned the property for more than ten years and had two honorable judges upon the church board. With such efficient men on his board, the pastor was reluctant to check up on them, although he knew that members of the church were complaining about the *architect's* alleged slowness. Men may be highly competent in their own fields but quite less capable in church work.

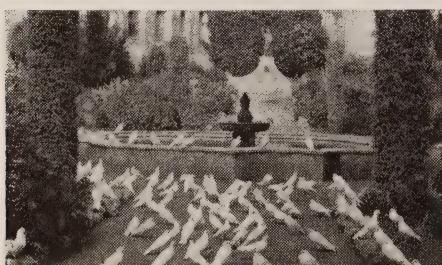
Try to keep the minds of church people upon the needs of the *church program*, activities to be provided for, and types of rooms, so that you will have time to develop plans and designs.

Take samples of working and engineering drawings, and large size detail drawings, to give the committee a better understanding of the amount of work involved. You might take along a few volumes of Sweet's catalog, if you employ a porter, to indicate all the materials, equipment, items, etc., you must study in order to recommend the best for their particular problem.

If there is any question as to the amount of your fees, tell how much it costs to employ good draftsmen, college graduates, and to pay office rent, cost of blueprinting, typing specifications, etc.

Show them the difference between a tracing and a blueprint. Many think it takes a good architect "to make a blue print." Show them a bushel basketfull of your discarded "try out plans" which you and your staff developed and threw away during the course of "studying the problem" to develop the best possible solution for the individual project.

For centuries the noblest buildings were erected as a tribute to man's belief in God. May it be so again!



Mission
San Juan
Capistrano
California

XXV

REMODELING LARGE AND SMALL BUILDINGS

The church that has a substantial but badly planned building or one that is inadequate for its present and future program need not abandon hope of having facilities that will enhance the work of the church.

Every church building, even those built recently, should be examined from the viewpoint of the task of the church for these times and for the immediate future. Often just building a partition across a large room, dividing it into two rooms, will increase tremendously the efficiency of the space. Some rooms, even in small churches, have ceilings high enough so that the space can be divided into two stories. Seating plans in many churches have been rearranged together with remodeling of the pulpit platform so that the "auditorium" was transformed into an effective sanctuary.

The same type of church building organization for studying the needs should be assembled and set to work for a remodeling program as is suggested for a complete new church building enterprise. A remodeling project must be based on program needs. In hundreds of cases, the writer has been asked to visit church buildings to make suggestions for remodeling them, where churches had spent practically no time in determining the program and needs for the work presently required of the church. The needs of the church program rather than the possibilities of the building should control the remodeling and enlargement plans.

The financial organization and program for an improvement enterprise should be the same as for a new building. A congregation may achieve a tremendous uplift in spiritual power and church morale through an improvement program.

The steps then briefly are:

First, determine the needs for rooms and equipment.

Second, employ during this preliminary period of study and fact-finding the best available consulting service.

Third, employ the very best architectural service available for an examination of the building structurally and for preparing the outline plans for improvements and for the total architectural service.

Throughout the entire enterprise conduct the promotional publicity, educational and financial programs just as in a new enterprise.

Quite frequently we are asked to offer suggestions for remodeling the so-called Akron style church building in which the school portion of the building is a high ceiled room with a gallery. Such rooms may be divided by construction of level floors into two or even three stories

of useful rooms. If roof supports do not prevent, the best method in such a building is to tear out the existing gallery clear to the wall, then build level flooring across the room dividing both floors into rooms with partitions of soundproof construction as may be desired.

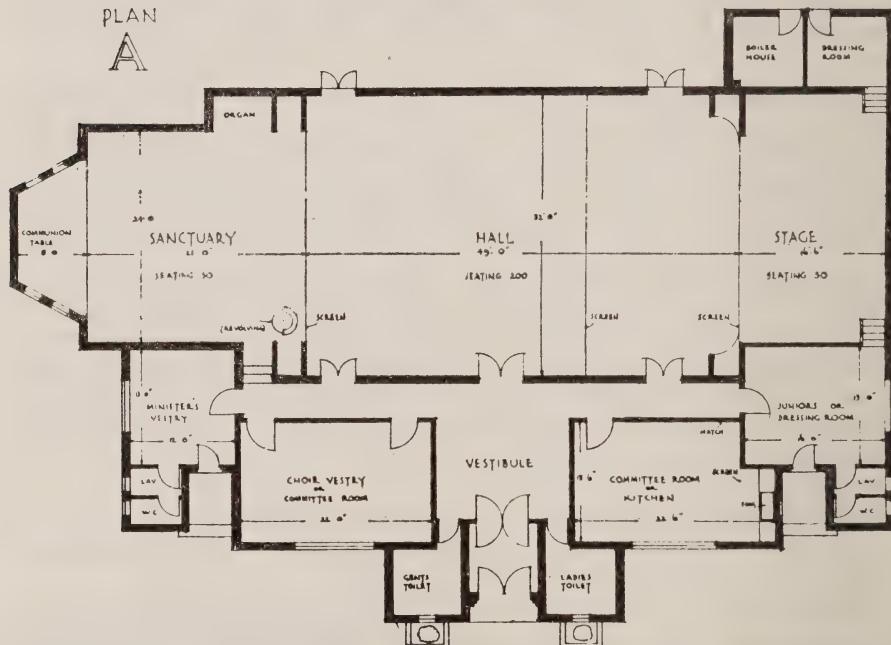
In addition to remodeling the existing building, new additions will be needed. Childrens' groups should be placed in the new construction where the ceiling can be of proper height, and the lighting and decoration designed suitably for children. Older groups may use remodeled spaces in existing buildings.

Usually, it will be necessary to provide an adequate fellowship hall for the social and recreational activities in the new addition. In writing the building program, the building organization will assemble the statement of requirements and offer certain suggestions to the architect, as to the groups and activities that may be provided in the new addition.

Remodeling projects usually include a complete redecorating program. The architect should be engaged to include this in his work.

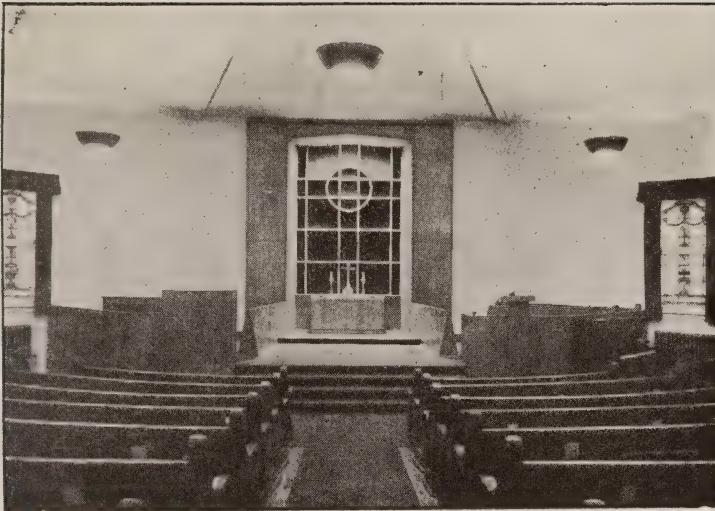
PLAN

A



A "Two-Way" Plan, proposed by the Church Extension Committee of the Baptist Churches in England for housing newly gathered congregations. This plan offers a very worth-while suggestion for the oft recurring problem among the churches in the United States. During worship services the congregation is seated facing the sanctuary. A screen shields the sanctuary when, with movable seating the hall is used for many other activities.

The nave and doubtless other rooms will be added later when growth of the congregation and resources permit.



Remodeled Corner Platform Church

A terrible stockade of false organ pipes, the organist's back and mirror! formed the focal center of the room. The nicely designed tone opening is backed by a symbolical red fabric.

Many badly planned churches must be continued in use for the corporate worship of many generations. The worst of them can so be improved that their effectiveness will immeasurably be increased.

Congregational Church

Forest Grove, Oregon

D. W. Edmundson, Architect



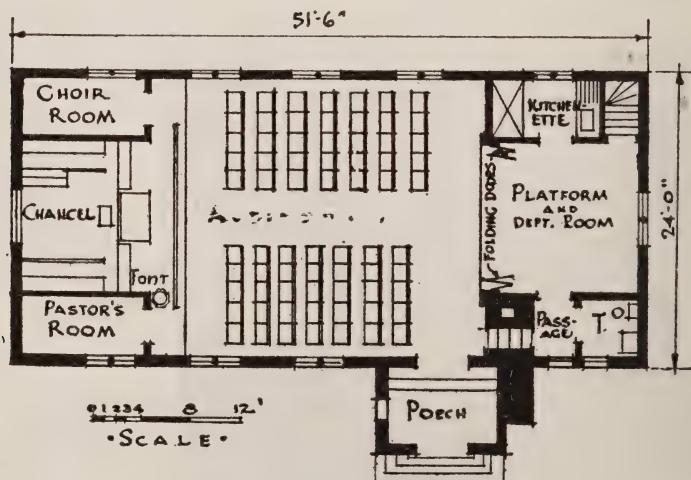
Church before remodeling

Sanctuary Methodist Church
Ardmore, Pa.



Sundt, Wenner & Fink, Architects

Formerly the pulpit platform was in a corner far to the left, with curved pews, slanted aisles, sloping floor. Remodeled, 1937.



Plan for a combination church unit for a newly gathered congregation.

XXVI

A CHECK LIST

It is the purpose of the church building program or statement of needs to enable the architect to prepare drawings that will result in a thoroughly satisfactory and adequate building. This statement of requirements, even if carried out to complete detail, leaves a very great deal of work for the architect to do.

Each member of the Plans and Construction Committee as well as those on the Program Committee, who are to help approve the plans may wish to have his private check list of items that he may wish not to be omitted. This is not to invite members of the committees to make nuisances of themselves, but it is disheartening to find certain small but very important items just forgotten or installed in error.

Oversights Can Be Avoided

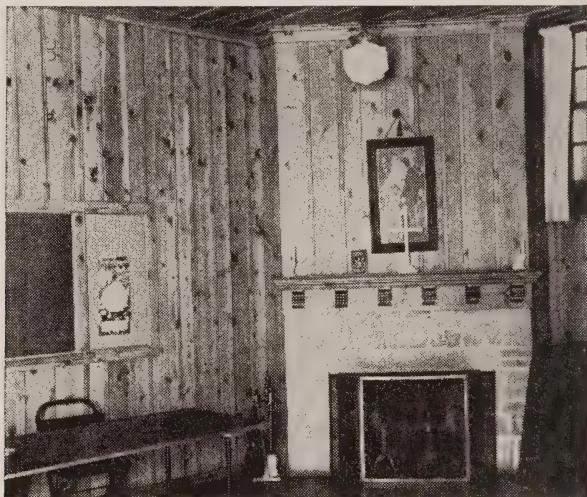
Here are a very few random items on the check list of one committee member who wished to be assured respecting certain items when the first set of preliminary plans was reviewed:

1. Is the provision for coat rooms for each department adequate and suitable? (Check and double check.)
2. Are the windows at proper height for children of different ages and sizes?
3. Are there sufficient electric outlets for using floor lamps where possibly needed and for using projection equipment? Wiring for house phone system? For sound pictures? For television? For cleaning equipment? Wiring for aids for the hard of hearing?
4. Is it necessary to pass through a room in order to reach another room?
5. Will the heating plant provide for heating one or two rooms separately when required? Which rooms?
6. Describe complete lighting effects for chancel; nave; stage; chapels.
7. Church bell. Chimes.
8. Height of middle of chancel floor above nave. Of pulpit.
9. Report of acoustical engineer for all rooms.
10. Width of aisles. Width of corridors.
11. Type of construction (soundproof) of partitions.
12. Lavatories. Check and check again.
13. Provisions for preparing flowers. Storage of vases.
14. Electric outlets outside of building.
15. Drinking fountains.
16. Flooring of all rooms.

17. What rooms are to be available for multiple use and for what groups and activities?

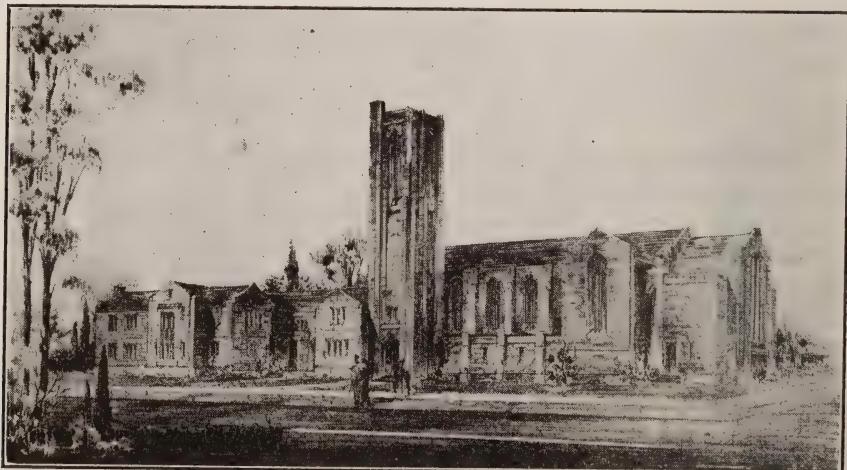
18. Storage spaces.

The check list may also help guard against the introduction of things that are not wanted such as annoying signal bells and other distracting things that had better be excluded.



Combination youth room and class room. The cross on the mantel helps identify the room as related to the work of the church. A swimming pool or gymnasium, if in a church building, should have features that indicate that these rooms are in and a part of **The House of God**.

Calvary Methodist Church, Frederick, Maryland
Architect's sketch



Parish House

Offices

Nave

Chancel

Sundt, Wenner & Fink, Architects
W. H. Thomas, Consulting Architect

XXVII

TO THE PASTOR

It has been the writer's privilege for more than twenty-five years to be associated with splendid pastors and laymen in all areas of Protestantism and in every state of the United States during their leadership of church improvement and new building programs. Increasingly pastors have become concerned about the religious effectiveness of their church buildings. Formerly, some pastors became rather impatient when they had to give attention to matters of property, building improvement or new equipment. Many were content to leave such problems to their officials. Today, however, we find pastors who are eager to give the necessary religious leadership in church building and improvement programs as vital parts of their ministry. Successful pastors no longer separate the secular in church work from the spiritual. They know that a picture or a dozen children's chairs may be selected for the glory of God and in such a way as to make religious work more effective. The pastor finds many opportunities for fruitful preaching in connection with a church building enterprise. In such a program he has a potent means for uniting his congregation and leading them forward to a worthy goal. Minor difficulties, small jealousies, and problems within the church organization fade out of existence during the promotion of such a noble enterprise. The pastor need make no apology for assuming the position of pastoral leadership in such a truly religious program.

There are splendid laymen in the churches who give most devoted service to the church but, nevertheless, they have their own life's work and its involvements on their minds. Throughout the long days they may be besieged with all sorts of problems encountered in a wild and competitive world. They come to a church building meeting, usually in the evening, tired after the day's work and trials and pleasures. They sincerely love their church but naturally depend upon the pastor to furnish the reasons, guidance and leadership necessary for any successful enterprise.

There is an occasional exception but, usually, when a program drags we find it is because the pastor has not accepted a place of constructive leadership of the program. This does not mean that the pastor must draw up plans (Heaven forbid!), or personally solicit funds (though many pastors do this as a religious endeavor). He should understand the responsibility of pastoral leadership and not shirk from it. He must see that the best possible organization is established; that committee meetings are publicized and held; that an agenda is prepared for each of these meetings; that the needed work be accomplished before adjournment.

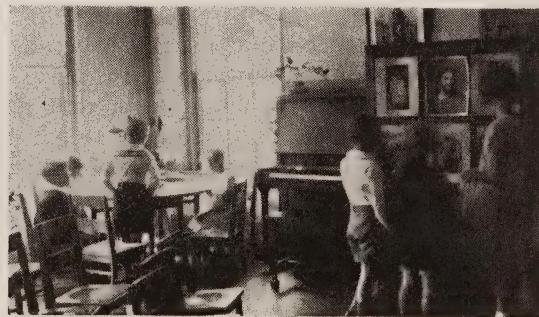
The pastor must be concerned about the selection of an architect and, should have interviews with the architects to be considered. The pastor and the architect must enter into a very close co-operative relationship. The pastor is the one who is supposed to understand the inner workings of the church, and he must transmit his religious enthusiasm and devotion to the heart and mind of the architect. At this point, the church building consultant can render service of vital importance.

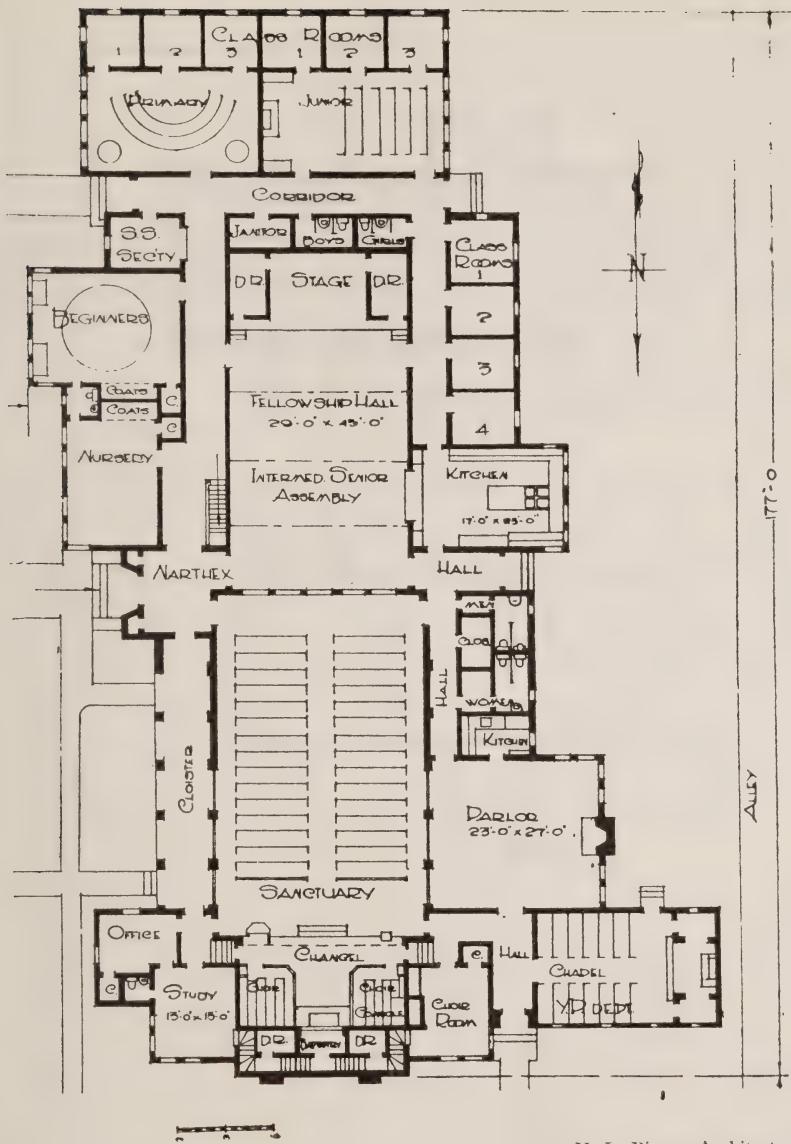
Awakening a sense of Christian financial responsibility among the members of his congregation is an important task of the pastor. He must demonstrate the need of improved or new buildings and equipment in carrying out religious and community services. Perhaps special classes or group meetings will be necessary to stress the value of increased participation and material support.

The pastor must see, too, that the financial program is maintained on a definitely spiritual level; it is the responsibility of the pastor to lead his people to an acceptance of the principles of Christian stewardship and sacrifice. He is responsible for leading the congregation to the spiritual plane from which they can unitedly advance to accomplish so worthy an undertaking as planning and building the House of God.

Through the church building program, the pastor has an opportunity of increasing his own spiritual and mental stature and of increasing his position of leadership in the congregation and in the community. Pastors who successfully lead church building programs as spiritual advances become stronger and bigger men, more useful ministers and more effective leaders.

In olden times bishops and officers among the ministry devoted their lives to leadership in building the church or cathedral. The church stands in constant need of such leadership—by religious leaders who see the holiness and the spiritual values in leading in church building or improvement enterprises, not as amateur architects or carpenters, but as pastors who embark upon a noble crusade and who lead their congregations with them. The Church needs pastors who, having successfully directed a church building enterprise, will visit neighboring churches that plan building enterprises and help by counsel and suggestions of important matters gained through their experiences.

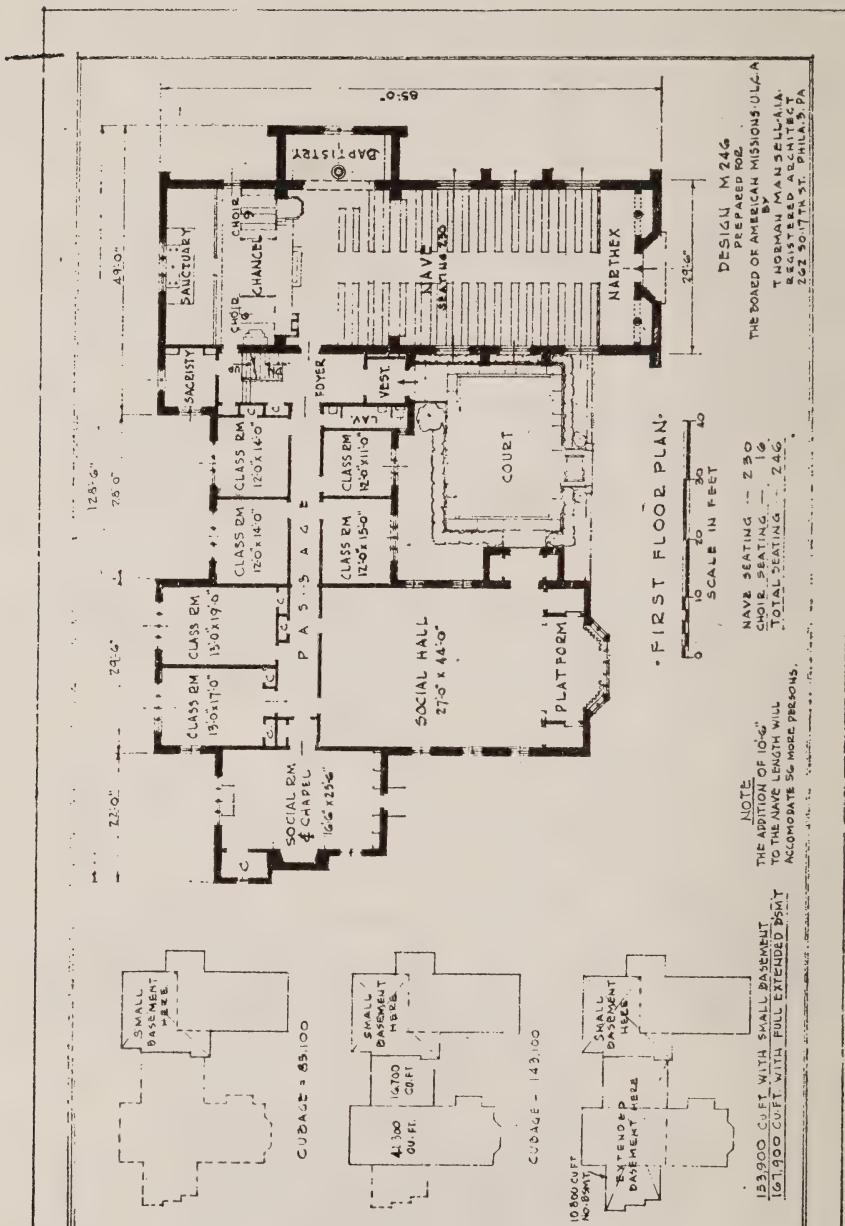




H. L. Pierce, Architect

Baptist Church, Las Vegas, Nevada

First units erected 1948. A splendid plan allowing flexibility. May be built in sections as the work and resources advance. No basement—Read the plan room by room and note the facilities and arrangements.



Preliminary study for church to be built in sections in a residential community. The architect skilfully helps the church to study several possible plans for erecting the first section or sections to be built so they will form permanent parts of the completed plant. Note: One of the class rooms will become the pastor's room; another will be the church office; a stairway will lead to a craft shop and dressing room beneath the platform; the social hall has a high ceiling; dining room on lower floor; a second floor over the class rooms. The exterior design can be developed in any desired order.

XXVIII

THE SMALL CHURCH

Those who talk about church architecture are sometimes accused of neglecting the church of less than 150 members of which we have thousands. The writer has been a member and pastor of such important churches.

Several cuts in this book are designed as plans, designs or rooms in small buildings or adaptable for small churches. The needs of the people of all age groups in small churches in modern life do not differ from those of people in cities.

Competent architectural service is just as important for the small church as for the large edifice.

We suggest a list of standards to be considered as minimum requirements for the smallest congregation.

1. The sanctuary or worship room to be of good proportions, producing an atmosphere conducive to worship; level floor, good acoustics, no distracting elements and proper arrangements for observing the sacraments and ritual. Place for choir.
2. Wall and woodwork carefully designed as to color scheme and aesthetic value.
3. Not less than three rooms in addition to the sanctuary. A minimum of five rooms, if possible, even though the rooms are small.
4. Walls and floors as nearly sound-proof as possible.
5. Efficient heating, lighting and ventilation.
6. A bulletin board indicating the hours of services, address of the minister and his available hours for interviews and service.
7. At least one room for special gatherings of church community, thirty by fifty feet in size, if possible, and free of posts; kitchen; stage.
8. Basement floors, if unavoidable, should not be more than three feet below grade. No bare concrete floors.
9. The best possible sanitary facilities that can be provided in the community.
10. Provisions for wraps, hats and rubbers; built-in cabinets for books, supplies, etc.
11. Attractive hangings and well-selected pictures.
12. Equipment, such as; blackboards, tables and chairs of proper heights; stereopticon or moving picture projector, workers' library, maps, fireplaces, etc.
13. Dust proof storage closets.
14. Have the nave narrow; no side aisles.

See pages 14, 17, 18, 23, 33, 77, 84, 95, 111, 143, 147, 154, 157, 164, 176, 178.

A LIST OF HELPFUL BOOKS

The History and Appreciation of Architecture

ANDERSON, R. G.: *The Biography of a Cathedral*, Longmans Green, 1945. 383 pages of remarkable story of the ages of Notre Dame of Paris. Extensive index.

BOND, FRANCIS: *English Church Architecture*.

BYRON, R.: *The Byzantine Achievement*, 345 pages, Knopf, N. Y. 1937. Extensive bibliography.

FLETCHER, BANISTER: *History of Architecture*. Non-technical. Hundreds of illustrations. Invaluable.

HAMLIN: *History of Architecture*.

SHORT, ERNEST H.: *History of Religious Architecture*. Excellent. 334 pages. Non-technical. Illustrated.

See list at the end of Chapter II.

Books on Methods and Programs with References to Architecture

DEVAN, S. ARTHUR: *Ascent to Zion*. Macmillan Co., 1942. Excellent, comprehensive, practical, well indexed bibliography.

ODGERS AND SCHULTZ: *The Technique of Public Worship*. An excellent book by experienced leaders working for better worship and worship settings.

PALMER, ALBERT W.: *The Art of Conducting Public Worship*.

PALMER, ALBERT W.: *Come Let Us Worship*. Macmillan, 1941. For smaller churches.

PAULSEN, IRWIN G.: *The Church School and Worship*. Comprehensive and practical. Bibliography. Covers much wider field than title indicates. Very valuable. Abingdon-Cokesbury, 75c (1948 price).

SPERRY, WILLARD L.: *Reality in Worship*.

UNDERHILL, EVELYN: *Worship*. A profound scholarly and philosophical study of the inner realities of worship rather than its outward forms, by a great English mystic.

VOGT, VON OGDEN: *Art and Religion*, 1921. 263 pages. A sympathetic modern and Protestant appraisal of the historic and artistic background of public worship. Very important.

Glass

CONNICK, CHAS. J.: *Adventures in Light and Color*, Random House, N. Y., 1937. A remarkable monumental volume—indispensable in the field of stained glass.

SAIN'T, LAWRENCE B. AND H. ARNOLD: *Stained Glass*. (A. and G. Black) 1913.

Stained Glass, Quarterly Magazine, Stained Glass Association of America, Newtonville, Mass.

Stained Glass Technique for Amateurs, Almy. Harpers, 1948.

General—Church Building

SCOTFORD, JOHN R.: *The Church Beautiful*. Pilgrim Press, 1945. Suggestive especially for remodeling. Many illustrations, 162 pages.

WATKINS: *The Church of Tomorrow*.

Symbolism

WEBBER, F. R.: *Church Symbolism*. Best available book on Christian symbolism. Jansen, Cleveland, Ohio.

STAFFORD, THOS. A.: *Christian Symbolism in the evangelical Churches*. Abingdon-Cokesbury, 1942. Excellent.

Literature Published by the Interdenominational Bureau of Architecture

(A list of more than 100 titles of books, pamphlets, leaflets, will be sent on request.)

The Church Building Guide, Conover. 26 chapters, 60 cuts. Lists 250 American church buildings. For pastors, architects, church workers, and committees. Leatherette. \$1.50. Very useful. Often purchased for members of church boards. Price, six for \$8.25.

<i>Planning Church Buildings</i> , costing \$35,000 and upward. Largest collection of plans for Protestant churches assembled, current and recent, 64 over-sized pages.	
144 cuts, floor plans, sketches and photos, exterior and interior views.....	\$2.00
<i>Planning the Small Church</i> , 44 pages, 8½x11. Cuts, plans, exterior, interior views.....	\$1.00
<i>The Church School and Parish House Building</i> . Complete, well illustrated, \$1.50 1948.	
<i>Rebuilding the Town and Country Church</i> , 16 pages, 8½x11. Cuts, plans, exterior, interior views, for remodeling and enlarging the 1, 2 and 3 room church.....	.50
<i>Church Building Finance</i> , Conover, 14 chapters, 64 pages. Stimulating, practical, comprehensive. Six for \$4.00. Every member of the financial organization can profit by it.....	.75
<i>Building for Worship</i> , Conover. Sixty pages, profusely illustrated, giving detailed study of chancel, pulpit, windows, organs, etc. 23 chapters.....	.50

SOME WORDS BELONGING TO THE CHURCH

See also Chapter IX, section on the chancel and its equipment.

Aisles. Spaces outside the row of columns in a building with clerestory. There may be seats in these spaces.

Altar. Not to be used if the object referred to is a communion table.

Apse. A semi-circular or polygonal termination of a choir or chancel.

Baptistry. That part of a church set apart for the administration of baptism. Often, in the Old World, a separate building.

Baroque-Rococo. A style of decoration distinguished by scrolls, etc., following the Renaissance. Tended to become extravagant in frivolous ornamentation.

Basilica. In early Christian times a church that more or less retained the plan of halls originally erected for legal or business meetings.

Belfry. A ringing room or part of a church tower containing bells. Formerly a detached tower for bells.

Belle Cote. A place where one or more bells are hung on buildings which do not have towers.

Byzantine. The style evolved in Byzantine in the 5th Century A.D. marked by the dome, wide-spreading round arches, and often elaborate color, ornamentation and mosaics.

Campanile. Tower not attached to a building.

Chancel. The portion of the church set apart for the clergy and choir.

Clerestory. The wall that rises above the roof over the side aisles when the middle of the nave is higher than the roof at the sides. This wall usually has windows.

Cloisters. Covered passages.

Column. A pillar including its base, shaft and capital.

Communion rail. A railing used at some churches at which communicants or other worshipers kneel. Not properly called an altar. Should be designed to facilitate kneeling.

Dossal or Dorsal. A hanging of fabric behind an altar or table.

Fenestration. The whole system and arrangement of windows and other wall openings.

Gothic. A term of contempt applied to medieval architecture by enthusiasts for the Renaissance. The Gothic, not strictly a style, applies to the spirit of architectural design during the 13th to 15th centuries. Marked by the prominence of the vertical note in which all elements seem to mount ever upward, expressive of spiritual nobility, capable of infinite variety of detail in plan and design.

Georgian-Colonial. Work in America inspired by the Georgian classic revival in England (1714 onward). Many elements carried over from Italian and other Renaissance influences.

Mensa. The top or table part of an altar.

Narthex. The vestibule or closed-in porch across the building at the rear of the nave. *Nave*. From "Navis" (L) a ship, the part of the church in which the congregation is seated on the main floor, or in a clerestory church, the part of the building between the columns that support the clerestory walls.

Norman. The style in England preceding the Early English (Gothic) and corresponding to the Romanesque on the Continent.

Renaissance. Designs resulting from the revival of classic forms in Europe in the 15th and 16th centuries and following. Many elements of classic temples recalled. Used much for civic buildings.

Romanesque. Developed by Christian builders from the Roman Basilica and the Byzantine. Featured by heavy piers, round arches.

Rood Beam. A beam at the line between the nave and chancel supporting, or from which was hung a cross.

Reredos. Ornamental screen back of an altar.

Retable. A kind of shelf or table rising a short space above the back part of the altar. A gradin.

Sacristy. A small room for keeping sacred vessels, vestments, books.

Transept. That part of the church across the nave in front of the chancel and extending beyond the sides and forming the ends of a cross.

West End. The end of the nave opposite the chancel (East End).

A LIST OF SOME INTERESTING CHURCH BUILDINGS

(Erected during the past thirty years or so)

About Visiting Churches

"Please send a list of churches we may visit to gain ideas for our new building program." So writes the secretary of the Building Council of a Midwestern church. While we have seen most of the church buildings in the country, we do not know one that should be copied in its entirety by the architect of this church. There is a church one hundred miles distant that has an excellent kitchen and an interesting exterior design. The rest of the building has many inadequacies, and its good features would be unsatisfactory for a church in another location.

Often it is more profitable to spend the time that would be required to visit buildings, in a more adequate study of the church program needed at home, regardless of what other churches are doing. It is the architect's responsibility to plan the church needed and he can do a more satisfactory work if unhampered by being urged to adopt this or that feature noticed in another building where possibly it was quite reasonable and proper.

We list the churches named because they have some interesting features that would repay the time required for a visit, if one were in the vicinity. A visit to some of them would be well worth the expense, the time and effort required to travel even a considerable distance. This is by no means a complete list of notable or interesting American churches. Each churchman would, if asked to assemble such a list, have his own individual preference as to the edifices to be mentioned.

The writer welcomes suggestions for further listings. A complete classified descriptive catalog of *commendable* American church buildings should be assembled, if the time and money necessary to do such work could be found by someone.

Alabama

Montgomery, Central Christian, First Methodist.

Arizona

Phoenix, Congregational; Mormon Church, 18th and Brill Sta. (1948). St. Francis Xavier Parish School.

Tucson, First Methodist; Mesa, Mormon Temple.

Tempe, Congregational (addition).

Arkansas

West Memphis, Methodist.

California

Bakersfield, First Baptist; First Christian Science.

Berkeley, First Congregational; University Christian.

Glendale, Congregational. Forest Cemetery, three chapels.

Hollywood, First Methodist.

Los Angeles, First Congregational; Thirteenth Christian Science; Twenty-Eighth Christian Science (exterior and grounds); Wilshire Boulevard Christian; Wilshire Methodist; Westwood Methodist; St. John's Catholic ("Modern"); Tenth Ave. Baptist at 78th St.

North Glendale, Methodist.

Orland, Federated.

Pasadena, All Saints Episcopal; First Lutheran. Petaluma, Methodist.

Sacramento, Westminster Presbyterian; First Methodist.

San Diego, St. Joseph's Cathedral, Roman Catholic.

San Francisco; Grace Cathedral, Episcopal; Temple Emmanu-El, Hebrew.

Hamilton Square Baptist.

Colorado

Denver, First Baptist; Episcopal Cathedral.

Longmont, Lutheran.

Connecticut

Bridgeport, First Methodist; United Congregational.
Canaan, St. Joseph's Roman Catholic.
Danbury, Christian.
Hartford, Asylum Hill Congregational (chapel and Connick glass); Trinity College Chapel.
New Haven, St. Thomas More Chapel, Roman Catholic (modern).
Waterbury, Bunker Hill, Congregational.
West Hartford, First Congregational; St. John's Episcopal.

Delaware

Dover, People's Congregational-Christian; Presbyterian.
Newark, Methodist (remodeled).
Wilmington, First Presbyterian.

District of Columbia

Church of God, 16th and Taylor.
Metropolitan, Methodist at Wesley Heights.
Reformation, Lutheran.
Washington Cathedral, Episcopal.

Florida

Jacksonville, Good Shepherd, Episcopal; Riverside, Presbyterian.
Miami, Temple Israel.
West Palm Beach, Bethesda-by-the-Sea, Episcopal (for landscaping.)

Georgia

Atlanta, Christ the King, Roman Catholic (exterior and interior design and glass);
Educational Building, Emory University, Methodist; Druid Hills, Presbyterian;
Druid Hills, Baptist; Morningside Presbyterian (under Const. 1948).
Columbus, St. Luke's Methodist (1948).

Illinois

Chicago, Bryn Mawr Community; First Unitarian; Fourth Presbyterian; Temple Israel; Trinity Methodist (Beverly Hills); University of Chicago Chapel; Chicago Theological Seminary, devotional chapel.
Evanston, First Methodist; First Congregational and separate parish house; Chapel at Garrett Biblical Institute; Episcopal Seminary.
Highland, First Congregational.
La Grange, Emmanuel Episcopal.
Moline, First Congregational.
Oak Park, Good Shepherd Lutheran; First Methodist.
Springfield, First Presbyterian (remodeled sanctuary).
Wilmette, Methodist.

Indiana

Anderson, First Methodist (remodeled sanctuary).
Aurora, Baptist.
Bloomington, Christian.
Columbus, Tabernacle Christian (modernistic, cost \$700,000).
Fort Wayne, Trinity Lutheran.
Gary, First Methodist.
Hammond, United Brethren.
Indianapolis, Broadway Methodist; Irvington Presbyterian; Tabernacle, Presbyterian.
Mishawaka, First Evangelical.
Muncie, High Street Methodist.
Whiting, Methodist.

Iowa

Clinton, Presbyterian.
Conrad, Methodist (moderate size).
Des Moines, Plymouth Congregational.
Forest City, Immanuel Lutheran.
Fort Dodge, First Presbyterian.

Kansas

Kansas City, Central Christian.

Kentucky

Ft. Thomas, St. Thomas Roman Catholic.
Lebanon, Methodist.
Newport, St. John's, Congregational; St. Stephen's Roman Catholic.

Maine

Lewiston, Bates College Chapel.

Maryland

Baltimore, Immanuel Lutheran.

Chevy Chase, Presbyterian; Methodist.

Frederick, Calvary Methodist.

Glyndon, Methodist (local stone).

Massachusetts

Boston, Jamaica Plain Congregational.

Medford, Baptist.

Springfield, Trinity Methodist; First Baptist.

West Newton, Second Congregational, Trinity Episcopal.

Winchester, Congregational.

Worcester, First Baptist; All Saints, Episcopal; Wesley Methodist. Wellesly, Congregational. Walpole, Congregational.

Michigan

Albion, First Christian Science.

Ann Arbor, First Methodist; First Presbyterian.

Cranbrook, Christ Episcopal.

Detroit, Bushnell Congregational; Nardin Park, Methodist; Woodward, Christian.

Grand Rapids, First Methodist.

Kalamazoo, Congregational; First Methodist (sanctuary).

Marquette, First Presbyterian.

Muskegon, Central Methodist, Ypsilanti, Baptist.

Minnesota

Alexandria, Congregational.

Duluth, St. Paul's Episcopal.

Hibbing, Methodist (moderate size).

Minneapolis, Mayflower Congregational; Oakland, Evangelical; Hennepin Avenue Methodist (Art gallery, Connick glass); St. Austin's Roman Catholic (Modernistic); St. Mark's Episcopal.

St. Paul, House of Hope, Presbyterian.

Rochester, Presbyterian.

Missouri

Columbia, University Methodist.

St. Louis, Church of Our Savior, Lutheran; Second Christian Science; St. Mark's Episcopal.

St. Louis, Union Ave., Christian.

Montana

Great Falls, First Presbyterian.

Helena, Episcopal Cathedral.

Nebraska

Grand Island, Trinity, Methodist.

Lincoln, First-Plymouth, Congregational, very interesting.

Omaha, St. Paul's, Methodist; Dundee Presbyterian.

Nevada

Boulder City, Federated.

Reno, First Methodist.

New Hampshire

Claremont, Methodist.

Hanover, Congregational.

Peterborough, All Saint's, Episcopal.

New Jersey

Asbury Park, Ballard Methodist.

East Orange, Baptist.

Flemington, Baptist.

Montclair, First Christian Science; First Baptist; First Congregational; First Presbyterian.

Patterson, Broadway Baptist.

Plainfield, First Baptist; Crescent Presbyterian.

Princeton, University Chapel.

Red Bank, Methodist.

National Park, Methodist (medium size).

New York

Albany, Trinity Methodist.
Brooklyn, Hansom Place, Methodist; St. Mark's Methodist.
Bronxville, Reformed.
Buffalo, St. John's Episcopal; Trinity Episcopal.
Far Rockaway, Sage Memorial Presbyterian.
Glens Falls, First Presbyterian.
Lake Delaware, St. James, small, splendid.
Mt. Kisco, St. Mark's Episcopal.
New Rochelle, First Presbyterian.
New York City, Cathedral of St. John the Divine, Episcopal; Chapel of the Intercession, Episcopal (excellent); Christ Methodist (Park Avenue at 60th); Church of the Heavenly Rest, Episcopal (5th Avenue at 90th Street); First Christian (Park Avenue at 64th Street); Riverside Baptist (Riverside at 122d Street); St. Bartholomew's, Episcopal (Park Avenue at 50th Street); St. Thomas', Episcopal (Fifth Avenue and 53rd St.); St. Vincent Ferrer, Roman Catholic, 869 Lexington Avenue; Temple Emmanu-El, Jewish (Fifth Avenue at 65th Street) (excellent, glass and chapel); St. Patrick's Catholic Cathedral, New glass by Connick.
Westpoint, Military Academy Chapel.
White Plains, Church in the Highlands, Congregational.

North Carolina

Charlotte, First Methodist; Myers Park Presbyterian.
Chapel Hill, Sprunt Chapel.
Concord, Presbyterian.
Durham, Duke University Chapel, exquisite. Greensboro, First Presbyterian.
Kings Mountain, Presbyterian.
Winton-Salem, Centenary Methodist.

North Dakota

Dickinson, First Congregational.
Fargo, Plymouth Congregational; First Presbyterian.
Grand Forks, Lutheran.

Ohio

Cincinnati, Grace Lutheran; Hyde Park Methodist; Knox Presbyterian.
Cleveland, Cleveland Heights, Baptist; Christ Methodist; Church of the Saviour, Methodist (Cleveland Heights); Epworth-Euclid, Methodist.
Columbus, First Congregational; Broad St. Presbyterian (remodeled).
Fremont, Lutheran.
Lima, Church of God.
Massillon, St. Paul's Lutheran.
Youngstown, Trinity Methodist (exceptional).

Oklahoma

Tulsa, Boston Avenue Methodist ("modernistic"); First Methodist; University Methodist.

Oregon

Pendleton, Presbyterian.
Portland, Sixth Christian Science.
Salem, Congregational.

Pennsylvania

Allentown, Muhlenburg College Chapel; Asbury Methodist.
Ardmore, Presbyterian; Roman Catholic; Methodist (being planned).
Beaver Falls, Presbyterian.
Bradford, Baptist; Roman Catholic.
Erie, Church of the Covenant, Presbyterian.
Hazelton, Christ Lutheran.
Huntington, Reformed.
Mercersburg, Academy Chapel.
Philadelphia, Chapel of Episcopal Divinity School; Church of the Mediator, Episcopal; First Methodist, Germantown; Roxboro, Leverington Presbyterian; Immanuel, Lutheran; St. Paul's, Chestnut Hill, Episcopal; Holy Child, Roman Catholic (exceptional).
Pittsburgh, East Liberty, Calvary, Episcopal; East Liberty, First Baptist; East Liberty, Lutheran; East Liberty, Presbyterian; Sacred Heart, Roman Catholic (Glass); University of Pittsburgh Chapel.
Valley Forge, Chapel.

Rhode Island
Pawtucket, Park Congregational.

South Carolina
Columbia, Lutheran.
Spartanburg, First Presbyterian.

South Dakota
Gaston, Chapel, Sacred Heart Convent.
Pierre, SS. Peter and Paul, Roman Catholic (modernistic).

Tennessee
Johnson City, First Methodist; Munsey Memorial Methodist.
Knoxville, Church Street Methodist.
Memphis, Idlewild Presbyterian. Second Presbyterian.
Nashville, Westminster Presbyterian; Scarritt College Chapel; West End Methodist.
(for glass); Trinity Presbyterian.

Texas
Dallas, Highland Park Methodist; Highland Park Presbyterian.
Fort Worth, First Methodist.
Houston, First Presbyterian (1948).

Vermont
Rutland, Christ the King, Roman Catholic.

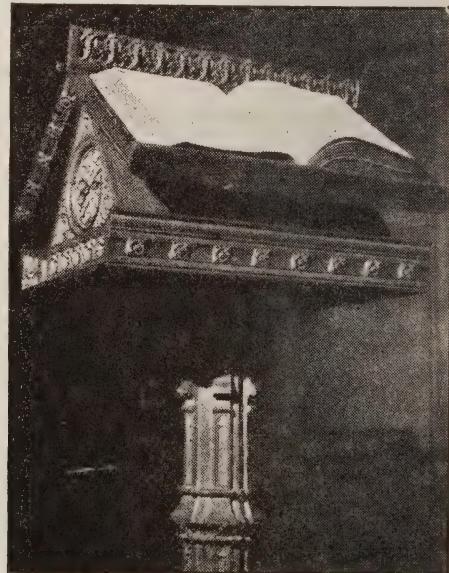
Virginia
Arlington, First Methodist (1947).
Richmond, First Baptist; St. Stephen's Protestant Episcopal.
Roanoke, Second Presbyterian; Lutheran.
Virginia Beach, Presbyterian.
Waynesboro, Lutheran; First Presbyterian Parish House.

Washington
Aberdeen, Trinity Lutheran (small).
Seattle, University Methodist.
Spokane, Episcopal Cathedral.

West Virginia
Clarksburg, Immaculate Conception, Roman Catholic.
Wheeling, St. Joseph's, Roman Catholic Cathedral.

Wisconsin
Green Bay, Congregational; First Methodist.
Madison, University Lutheran.
Milwaukee, Fourth Christian Science.

Wyoming
Casper, Methodist.
Cheyenne, Presbyterian.
Laramie, Episcopal.
Moose, Episcopal (log church).



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